
Meridian 1

Option 11C

Upgrade Procedures

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About this guide

This *Upgrade Procedures* guide contains all the information required to upgrade existing Option 11 and Option 11E systems to an Option 11C. It also includes procedures for upgrading the software as follows:

- upgrade to Option 11C from an Option 11 or Option 11E
- upgrade Option 11C software to a new release
- perform a same release software upgrade
- revert to a previous database
- restore a backed up database
- archive databases
- install archived databases
- review and clear upgrade information.

This guide does **not** describe how to add equipment (such as additional cabinets or line cards) to the system. If the system is to be expanded as part of the upgrade, complete the upgrade **first** (as described in this guide) then add equipment.

Related document

The *Option 11C Planning and Installation Guide, (553-3021-210)* should be consulted when additional equipment is to be added as part of the upgrade (such as an additional expansion cabinet at a remote site). It also contains site planning information and new system installation details for Option 11C systems.

Chapter 1 - An overview

General information

This chapter provides both, a brief overview of the Option 11C and a general overview of the Software Installation Program feature.

The hardware chapters includes the necessary hardware components which make up the system, upgrade scenarios and system specifications.

The software chapters describe the required software, the operations it performs and the various components that are part of the Software Installation Program feature.

System software and customer databases can be installed, upgraded and modified using the Software Installation program.

Overview

Option 11C cabinets

Option 11C has the capacity of three cabinets — one main cabinet and two expansion cabinets. Fiber optic cable is used to interconnect expansion cabinets to the main cabinet. Expansion cabinets can be located up to 3 km (1.8 mi) from the main cabinet.

Note: The fiber optic cable length between the main and expansion cabinets must not exceed 3 km (1.8 mi).

The Option 11C uses the NTAK11 cabinet as a main cabinet and as expansion cabinets.

The NTAK12 expansion cabinet is not normally used with the Option 11C. However, an existing NTAK12 expansion cabinet used with an Option 11 or Option 11E, interconnected with copper cable (NTAK1204 or NTAK1205 cable) and equipped with the NTAK26 Backward Compatible Daughterboard can be retained and used with Option 11C with the following limitations:

- No ethernet capability
- Upgrade to a three-cabinet system requires replacement of the NTAK12 cabinet
- Upgrade to fiber connectivity requires replacement of the NTAK12 cabinet.

NTDK20 Small System Controller (SSC) card

The NTDK20 Small System Controller (SSC) card is a new card which resides in slot 0 in the main cabinet. It provides the following features:

- Three serial (SDI) ports.
- A PCMCIA socket located on the SSC card faceplate.
- Connections for the Software Daughterboard.
- Two 16-channel conference loops.
- 30 tone generating channels.
- Tone service units that support DTR/XTD/MFC/MFE/MFK5/MFK6/MFR.
- Connectors for Fiber Expansion Daughterboards.

Fiber Expansion

New fiber optic interface hardware is introduced with the Option 11C. It consists of Fiber Expansion Daughterboards mounted on the NTDK20 SSC card in the main cabinet and Fiber Receiver cards mounted in the expansion cabinets.

Note: The MFI and EFI units used with Option 11E to interface with fiber optic cable cannot be used with Option 11C.

LED Fiber Optic Interfaces

Option 11C uses Class 1 LED Fiber Optic Interfaces. This product is considered safe when used under normal conditions.

The fiber optic ports on Fiber Expansion Daughterboards and Fiber Receiver cards are shipped equipped with protective caps or plugs in the fiber optic cable connectors. Glass fiber optic cable should also be equipped with protective caps on its connectors. These caps and plugs should not be removed until just prior to connecting the fiber optic cable.

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

Fiber Expansion Daughterboards

Fiber Expansion Daughterboards mounted on the NTDK20 SSC card allow the connection of fiber optic cables from the main cabinet to expansion cabinets in multi cabinet Option 11C systems. Each Daughterboard also provides an additional 16-channel conference loop and one SDI port at the expansion cabinet. There are three types:

- 1 The NTDK22 Fiber Expansion Daughterboard is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. It connects to one A0632902 Fiber Optic cable.
One of these boards is required for each expansion cabinet located within 10 m (33 ft) of the main cabinet.
- 2 The NTDK24 Fiber Expansion Daughterboard is used with an expansion cabinet located up to 3 km (1.8 mi) of the main cabinet. It connects to one multimode glass fiber optic cable which is dedicated to the Option 11C system.
One of these boards is required for each expansion cabinet located connect with glass fiber optic cable up to 3 km (1.8 mi) of the main cabinet.
- 3 The NTDK79 Fiber Expansion Daughterboard provides the same capabilities as the NTDK24 Fiber Expansion Daughterboard except that it interfaces with Single Mode glass fiber optic cable.

Fiber Receiver cards

Fiber Receiver cards installed in the first slot of expansion cabinets allow the connection of fiber optic cables from the main cabinet. There are two types:

- 1** The NTDK23 Fiber Receiver card is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. It connects to one A0632902 Fiber Optic cable.
One of these cards is required for each expansion cabinet located within 10 m (33 ft) of the main cabinet.
- 2** The NTDK25 Fiber Receiver card is used when the expansion cabinet is connected with glass fiber optic cable and is located up to 3 km (1.8 mi). It connects to one glass fiber optic cable which is dedicated to the Option 11C system.
One of these cards is required for each expansion cabinet located connected with glass fiber optic cable.
- 3** The NTDK80 Fiber Receiver card provides the same capabilities as the NTDK25 Fiber Receiver card except that it interfaces with Single Mode glass fiber optic cable.

NTDK26 Backwards Compatible Daughterboard

The NTDK26 Backwards Compatible Daughterboard allows the NTKD20 SSC card to be installed in an Option 11 or 11E system that is connected to an existing expansion cabinet using a metal expansion cable (such as an NTAK1204 or NTAK1205 cable). It provides 10 DS-30 loops for the expansion cabinet as well as an additional 16 channel conference loop for the system. However, it does **not** support:

- Option 11E or Option 11C fiber expansion configurations
- Ethernet interface, since the connector required for ethernet connection is used for the metal expansion cable.

The Backwards Compatible Daughterboard is installed on the Small System Controller (SSC) card in place of the two Fiber Expansion boards.

TDS, DTR and XTD circuit cards

The NTDK20 SSC card incorporates the functions of existing NTAK03 TDS/DTR, NT5K20 XTD and NT5K48 XTD cards. These cards may be removed to allow the slots to be used for other IPE cards.

Note: These cards may not be present on existing Option 11E systems.

The choices are as follows:

- **Remove the cards.**

If the cards are removed, TDS, XTD, and SDI port functions will have to be manually programmed on the NTDK20 SSC card.

- **Retain the cards.**

If they are retained, the choices are:

- Do nothing. TDS, DTR, and SDI functions will remain on the TDS/DTR and Tone Detector cards.
- Move some functions to the NTDK20 SSC card. (For example, move TDS and DTR units to the NTDK20 SSC card, leave the SDI ports on the NTAK03 TDS/DTR card).
- Define additional functions on the NTDK20 SSC card. (For example, add another SDI port or TDS channel).

Grounding

An NTBK80 grounding bar is used as a ground wire bridging point for ground connections to multiple Option 11C cabinets that are interconnected with fiber cable.

Note: Grounding methods vary depending on the type of cross connecting terminal used. In certain cases (such as with the Krone Test Jack Frame used in some countries) an NT80 grounding bar may not be required. Refer to the Option 11C *Planning and Installation Guide* (553-3021-210) that came with the system for more information.

CAUTION

When more than one cabinet is installed at the same site, they must be grounded to a single point ground source

Two-cabinet systems (that were upgraded from Option 11 or Option 11E) that are interconnected with copper cable (NTAK1204 or NTAK1205 cable) do not require an NTBK80 grounding bar.

Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about grounding methods and requirements.

Meridian Mail

If the existing system is equipped with Meridian Mail, it is recommended that it be placed in 'Courtesy Down' mode before performing a software upgrade. Once the upgrade is completed and the system time and date are set, the Meridian Mail feature will automatically start operating.

Adding equipment to an existing Option 11C

Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* information about installing and adding equipment (such as adding an expansion cabinet or a line card and so on).

System specifications

Table 1 (shown below) compares the specifications of Option 11, Option 11E and Option 11C systems:

Table 1
Comparison of System Specifications

Specification	Option 11	Option 11E	Option 11C
Maximum number of ports	224 voice ports 224 data ports	384 voice ports 384 data ports	384 voice ports 384 data ports
Input voltage	90 V to 240 V AC, -52 V DC	90 V to 240 V AC, -52 V DC	90 V to 240 V AC, -52 V DC
Number of Slots (4 Card Slots per superloop)	10 in the main cabinet, a total of 20 if an expansion cabinet is added	10 in the main cabinet, a total of 30 if two expansion cabinets are added	10 in the main cabinet, a total of 30 if two expansion cabinets are added
Total memory	Protected data store 64 k words Unprotected data store 64 k words Program store 2 M Words Customer data storage 64 k per copy	Protected data store 128 k words Unprotected data store 128 k words (256K with expansion daughterboard) Program store 4 M Words Customer data storage 256 k per copy	Protected data store 1.0 M words Unprotected data store 1.0 M words Program store 24 M words Customer data storage 512 k
Software generic	International X11, release 16 and 18	International X11, release 20 and 21	International X11, minimum release 22
Conference channels	32, 48 if expansion cartridge installed on the NTA01 CPU/Conf card	32, 48 if expansion daughterboard installed on the NTB45 System Core card	32 with 1 cabinet, 48 with 2 cabinets, 64 with 3 cabinets
Connection to expansion cabinets	NTA1204/5 copper cable	NTB1204/5 copper cable, or, Fibre optic expansion package	Fibre optic expansion package

Option 11C software

Option 11C requires X11 Release 22 and later versions of software.

Note: Release 22 and later versions of software cannot be used with existing Option 11 and Option 11E systems.

When upgrading from an Option 11 or Option 11E, the customer database must be extracted from the existing system. There are two methods of extracting the database:

- 1 By using the Customer Configuration Backup and Restore (CCBR) feature and a Personal Computer (PC).
- 2 By using an NTDK30 Database Upgrade Tool.

Software Daughterboard

The Software Daughterboard contains all the components associated with a particular release of software including software patches, preconfigured customer database, feature sets and other pertinent databases and software. It interfaces with the Option 11C CPU through a connector mounted on the component side of the Small System Controller (SSC) card.

Software Delivery (PCMCIA) Card

The PCMCIA is capable of storing (or archiving) several customer databases. Specific databases can then be retrieved and customized to suit individual Option 11C sites.

When upgrading or modifying an existing Option 11C, the PCMCIA stores a backup copy of the flash ROM while the flash ROM is being erased and re-programmed. If there is a problem during the upgrade or modification, the system can be restored to its previous state from the backup copy on the Software Delivery Card.

Once the installation modification is completed successfully, the PCMCIA can be removed from the Small System Controller card and reused at other sites.

Software Installation Program

The Software Installation Program provides a menu-driven method of selecting the various options for modifying or upgrading the software, customer data, feature set and Incremental Software Management (ISM) parameters. Information about the selections is stored in flash ROM in the form of a list of instructions for the program to follow when it is run.

Invoking the program

The Software Installation Program must be run from TTY 0 (port 0 on card 0). There are two methods of invoking the Software Installation Program:

- by issuing the “upgrade” command in overlay 143
- **or**
- by pressing ^I (control I) keys while the installation prompt is displayed during SYSLOAD.

CAUTION**Please read this important message on Upgrades**

When upgrading from Release 22 to Release 23 or higher, you **MUST** use the SYSLOAD method of upgrading as described below.

SYSLOAD method

Toggle Power Supply to OFF, then to ON. During the reboot, enter 'CONTROL-I' to access the Installation Program.

Upgrading from Release 22 to a higher Release cannot be achieved properly using the UPGRADE command.

UPGRADE method

Login to the system and select LD 143. Type UPGRADE to access the Installation Program.

If the 'UPGRADE' method is attempted, an invalid key code message will be displayed. If this occurs, reinitiate using the 'SYSLOAD' method.

Both methods (SYSLOAD or UPGRADE) can be used when upgrading from Release 23 to a higher Release or an up-issue of Release 23. Both methods are documented in this guide.

Function selection

The Software Installation Program is menu driven. The main menu provides the core functionality of the program. It encompasses the following key functions:

- installing software in a new system
- upgrading and modifying software in an existing system
- using utilities to work with archived databases, review data, back up data, undo an installation in progress and to clear unwanted data.

After all installation or upgrade selections have been made, validating keycodes must be entered. If an invalid keycode is entered, the install function will not be allowed to continue.

Note: Entering an invalid keycode does not affect the software and databases on the present system.

Once the keycode validation passes, the software is installed.

The Software Installation Program has other options as follows:

- **Clear Upgrade Information**
If for any reason the installation is to be terminated after the keycodes are entered, but before the installation is done, the installation can be aborted with this option.
- **Confirm Upgrade Information**
This option allows the review of the installation options chosen. It can be used after the keycodes are validated, but before the installation is done.
- **Set system time and date**
This is usually done prior to installation to ensure that all flash drive files have their correct creation date.

Keycodes

Installation of software, feature set and ISM parameters is protected by a security keycode scheme. The installation is not allowed unless the correct keycodes are entered.

Keycodes are required for each existing system upgrade. They are provided on a Keycode Data Sheet supplied with the software and security device. Keycodes are unique to each site for a particular combination of items such as software release, feature set, ISM parameters and so on.

Note: Contact your Northern Telecom representative if the Keycode Data Sheet is missing.

The Software Installation Program validates the keycodes. If the keycodes are valid, the installation function continues.

If the keycodes are rejected, the installation function is halted and one of the following actions can be taken:

- Check the software and make sure it is the correct version for this site
- Check the feature set and make sure the correct data was entered
- Check the ISM parameters and make sure the correct data was entered
- Check the keycodes and make sure the correct ones were entered (they must match the ones listed on the Keycode Data Sheet)
- Abort the installation.

Note: Validation of keycodes is limited to three consecutive attempts. After the third consecutive validation failure, the Software Installation Program returns to the main menu and any data entered during this session is lost.

Feature set and ISM parameters

The Software Installation Program allows the selection of a feature set to be installed and enabled on the Option 11C system. A feature set (such as General Business Application, Advanced Networking, and so on) has an associated list of software packages and ISM parameters. Several preconfigured feature sets may be included on the Software Delivery Card.

The Software Installation Program also allows the addition of individual packages from the feature set and the changing of system ISM parameters.

Since additions and changes are keycode controlled, the packages and ISM parameters must match those corresponding to the site's keycodes.

Note: The Software Installation Program does not check the prerequisites and interactions of added packages.

Aux ID

The Aux ID is entered using the Software Installation Program. When upgrading from an Option 11 or Option 11E, the existing site ID becomes the Aux ID.

Once assigned, the Aux ID remains for the life of the Option 11C.

Customer database

The Software Installation Program allows the installation of a customer database from one of the following sources:

- **Preconfigured database**
Several preconfigured databases and their associated feature sets may be included on the Software Delivery Card.

In addition, a minimal database is provided which consists of an empty configuration record with no customer data.
- **Archived database**
The Software Installation Program allows the archiving of various databases which can be used later at Option 11C sites. It allows multiple databases to be configured off-site and then installed ready-to-use at customer sites.

Note: Off-site programming of databases is subject to all security keycode restrictions. The off-site system must either be using the Security Device that will be installed in the Option 11C at the customer site, or must have its own keycodes for the feature set used.

- **Remote restored database**

A database may be remotely restored using the Overlay 143 (LD 143) CCBP remote restore command. This also provides a method of upgrading an Option 11 or Option 11E to an Option 11C.

- **Database Upgrade Tool**

An existing Option 11 or Option 11E can be extracted from an existing system and installed in an Option 11C through the use of the Database Upgrade Tool.

- **Backed up database**

The Backed Up Database option allows the copy on the backup flash drive to be installed. It is provided to recover a customer database if the flash daughterboard, which contains the primary flash drive with the operational customer database, fails.

Menu displays

The Software Installation program displays a series of easy to follow menus to assist in upgrading and modifying system software and customer databases.

Main menu

The *Software Installation Main* menu allows the selection of:

- 1) New System Installation
- 2) System Upgrade
- 3) Utilities.

Note: This selection is used to access the various utilities provided with the Software Installation Program.

Feature Set menu

The *Select the Feature Set you Wish to Enable* menu displays a listing of the feature sets that are currently available for installation.

Database Install menu

The *Select Database to Install* menu offers a listing of the available databases.

Database Archives menu

The *Archived Database available* menu displays a listing of the archived databases that are available for selection.

Database Upgrade menu

The *Select type of upgrade to be performed* menu provides selection of the type of upgrade to be performed.

Utilities menu

The *Utilities* menu allows such things as restoration of backed up data, archiving, reviewing data, restoring archived databases, clearing upgrade information and undoing software installations.

Restore menu

The *Restore* menu provides access to methods of restoring backed up databases.

Archive menu

The *Archive* menu provides a means of listing, removing and storing customer databases in an archive.

Chapter 2 - Upgrading a single cabinet system to Option 11C

General information

This chapter describes how to upgrade a single cabinet Option 11 or Option 11E to an Option 11C.

Summary of items required

The following items are required to complete this upgrade:

- One NTDK20 Small System Controller (SSC) card
- One NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable will already be present)
- One NTDK27 Ethernet cable (optional)
- Release 22 or later software on a Software Daughterboard
- Security Device
- Keycode Data Sheet
- A Personal Computer (PC) equipped with the CCBR feature to extract the customer data from the existing system
or
A Database Upgrade Tool to extract the customer data from the cartridge on the existing system.

Note: The PC can be on site or located remotely.

Upgrading to Option 11C

Summary of steps

The following list is a summary of the steps which should be followed when upgrading a single cabinet Option 11 or Option 11E to Option 11C:

- Perform a data dump (EDD) on the existing system.
- Extract the customer data from the existing system using the CCBR feature (unless the Database Upgrade Tool is being used).
- Install the NTDK20 Small System Controller (SSC) card
- Install the NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable will already be present)
- Load the new system software and customer data in the system
- Install the NTDK27 Ethernet cable (optional).

Expansion cabinets and additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment such as line cards. If additional expansion cabinets or other equipment is to be added as part of the upgrade to Option 11C, complete the upgrade as described in this chapter first. Once the system has been upgraded, refer to the Option 11C *Planning and Installation Guide (553-3021-210)* for information about adding expansion cabinets and other equipment to an existing Option 11C system.

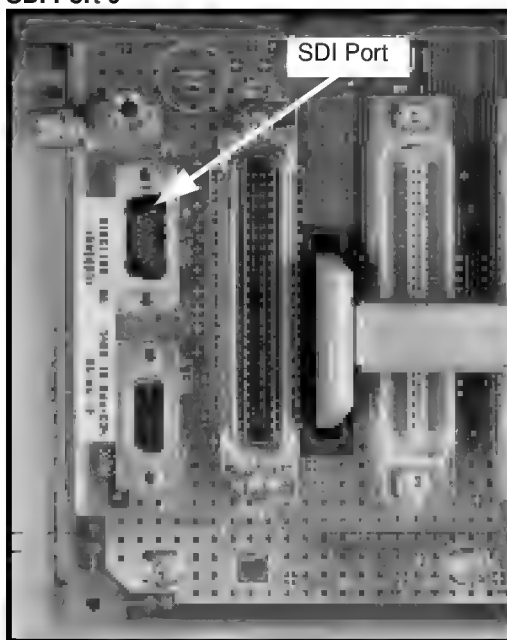
Upgrade procedure

The following procedure (Procedure 1 on page 19) describes how to upgrade a single cabinet Option 11 or Option 11E to Option 11C.

Procedure 1— Single cabinet upgrade to Option 11C**1 Connect a TTY terminal to SDI Port 0.**

The terminal must be connected to SDI Port 0 (see Figure 1 on page 19).

Figure 1
SDI Port 0

**2 Login to the system and perform a Data Dump on the existing system.**

This step must be performed. It is to make sure that any changes that were made since the last Data Dump are backed up. This is a precautionary measure in case the upgrade fails and you must revert to the former system.

- a) Load Overlay program 43 (LD 43)
- b) Enter command EDD
- c) Once the Data Dump is completed, exit LD 43 by entering
****.

- 3 Load overlay program 22 (LD 22) and print the ISM parameters. Make a note of the existing parameters.**

At the "REQ" prompt type "SLT" <CR> to print the ISM parameters.

The ISM parameters should also be indicated on the existing software cartridge.

- 4 Disregard this step and go to Step 5 on page 21 if using the Database Upgrade Tool to extract customer database from the existing system.**

Extract the customer data from the existing system using the CCBR feature and a PC.

Refer to "How to backup the configuration database" section in the Option 11 *Customer Configuration Backup and Restore guide* for details about using CCBR feature to extract data. Below is a summary of the steps to follow when extracting data using the CCBR feature:

Note: The procedure in the *Customer Backup and Restore guide* includes a step where an EDD is performed. That step can be skipped since an EDD has already been performed in Step 2 on page 19 of this procedure.

Below is a summary of the steps to follow when extracting data using the CCBR feature:

- a) Using a PC, and if not already logged in, login to the existing Option 11.
- b) Load overlay 43 (LD 43) and enter XBK to start a configuration data backup.
- c) At the INFO prompt, enter a name for the file (up to 128 characters) then press <cr> twice.
- d) Using the communications software on the computer, receive the database file using XModem CRC protocol. (Follow instructions in the manual supplied with the communications software package to receive the database file.)
- e) Wait for an 'OK' message indicating that the transfer is completed (can take up to 30 minutes). Once the backup is completed, enter XVR to verify the backed up data.
- f) Once the data is verified, exit LD 43 by entering ****.

5 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

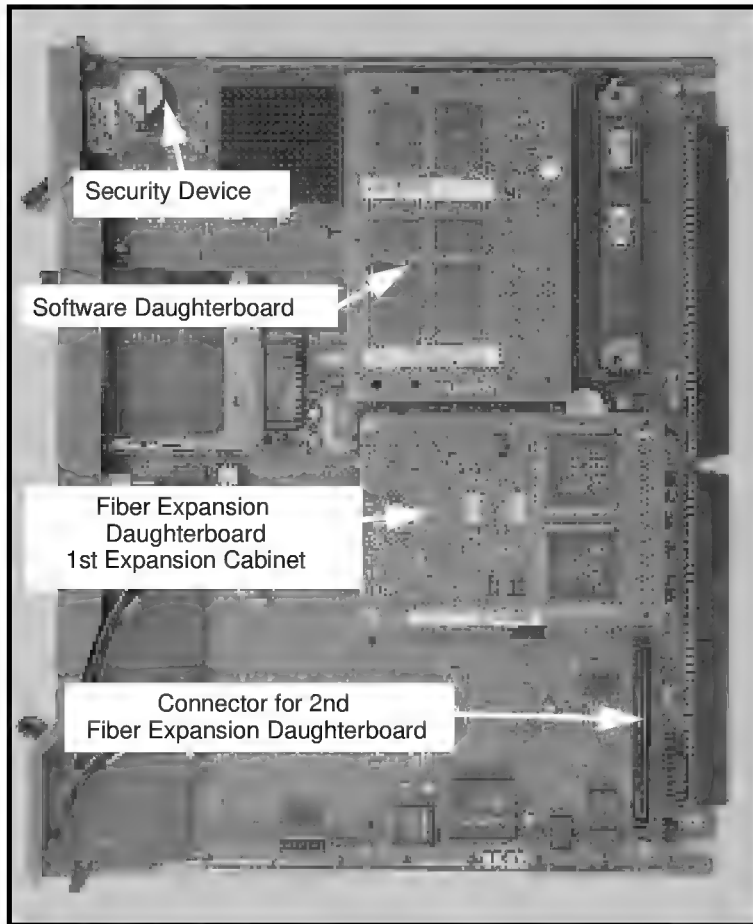
6 Attach the antistatic bracelet provided at the bottom of the cabinet to your wrist.**7 Remove the NTAK01 CPU/Conf or NTB45 System Core card from the cabinet.****8 Set the baud rate switches on the new NTDK20 SSC card to match the settings on the NTAK01 CPU/Conf or NTB45 System Core card that was removed.**

Note: The baud rate switches are located on the faceplate of the NTDK20 SSC card.

9 Install the Software Daughterboard and the Security Device on the NTDK20 SSC card as shown in Figure 2 on page 22.**CAUTION**

The NTDK20 SSC card is equipped with components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 2
NTDK20 SSC card



- 10 This step is optional and applies only if one or more expansion cabinets are to be added as part of the upgrade.**

Note: This step may be completed after the main cabinet has been upgraded to Option 11C. However, to prevent additional down time, it may be preferable to install any required Fiber Expansion Daughterboards now. Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about adding expansion cabinets to an existing system.

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

Install the Fiber Routing Guide as shown in Figure 35 on page 97.

Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for each expansion cabinet being added as shown in Figure 36 on page 99.

Connect the fiber optic cable to the daughterboard.

- **If using the A0632902 cable**, remove the two protective plugs from the Fiber Expansion Daughterboard.
Connect the cable to the Fiber Expansion Daughterboard making sure that the 'V' shaped groove on the cable connector is facing outward and that the connector is fully seated.
The black mark on the connector should not be visible when properly connected.
- **If using glass fiber optic cable**, remove the protective plug from the Fiber Expansion Daughterboard and remove the protective cap from the corresponding plug (Tx or Rx) on the fiber optic cable.
Insert the plug in its designated connector on the daughterboard.
Once inserted, lock the connector in place by turning it a half turn clockwise.
Repeat this procedure for the second fiber optic connection.

11 Reconnect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

The Software Installation Program is invoked automatically on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a "Help" facility to assist in making proper selections. However, if more detailed information is required, refer to the Option 11C *Planning and Installation Guide (553-3021-210)*.

12 Install the new NTDK20 SSC card in the slot vacated by the NTAK01 or NTBK45 card (Slot 0).

If a fiber optic cable is present (see optional step 10) make sure that it is placed in the Fiber Routing Guide.

Note: Do not staple or twist fiber optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

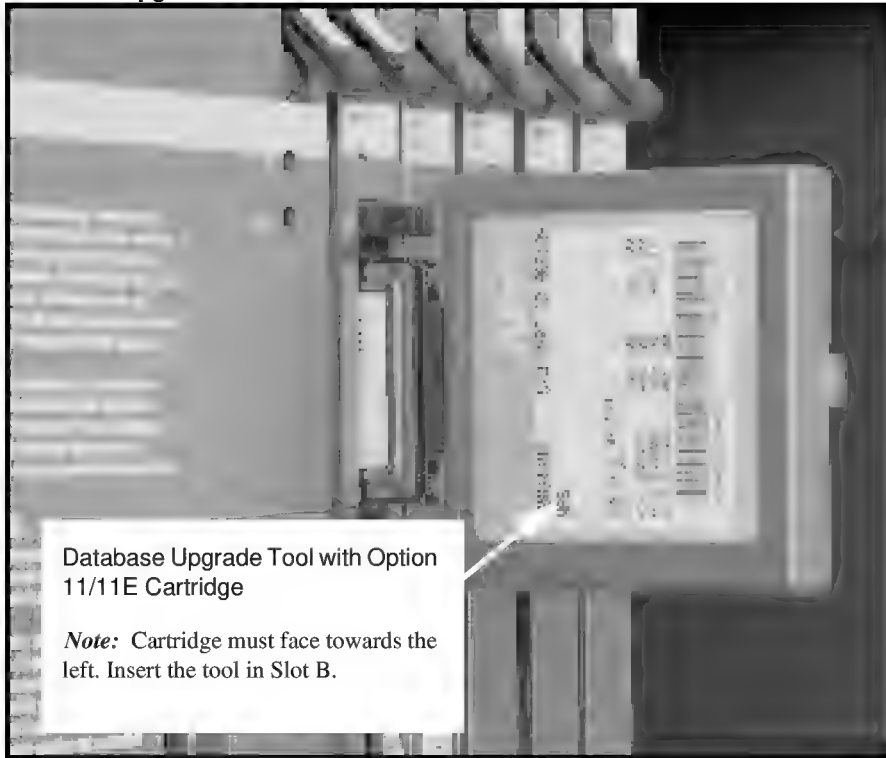
13 Skip this step and go to Step 14 on page 25 if the Database Upgrade Tool is not being used to extract the customer database from the existing system.

Note: Perform this step only if the Database Upgrade Tool is to be used instead of a PC to extract the customer database from the existing system.

Install the Software Cartridge from the existing system to the Database Upgrade Tool.

- a Remove the Software Cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card
- b Connect the Option 11 or Option 11E Software Cartridge to the connector on the Database Upgrade Tool.
- c With the software cartridge on the Database Upgrade Tool facing towards the left, insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 3 on page 25.

Figure 3
Database Upgrade Tool



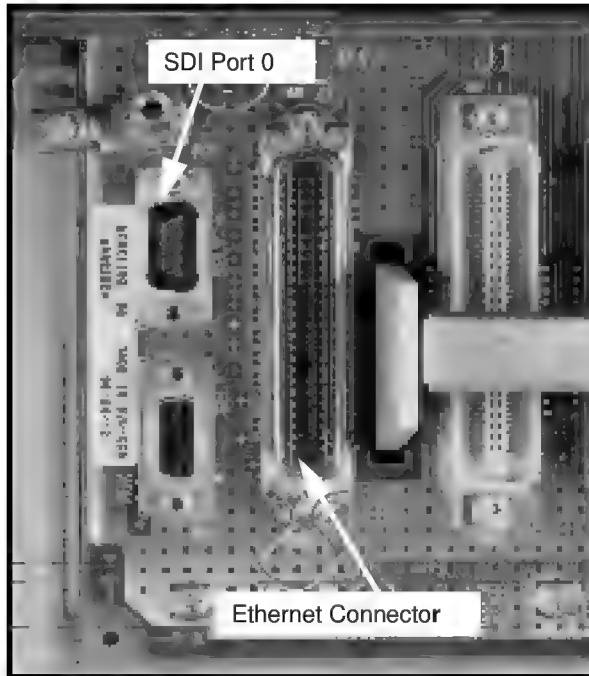
- 14** If not previously installed, install the NTBK48 three-port SDI cable to SDI port 0. Connect the TTY terminal to the connector on the NTBK48 cable labeled 'Port 0' (see Figure 4 on page 26).

Note: Since this cable is also used with Option 11E systems, it should already be present when upgrading from Option 11E.

CAUTION

The TTY must be connected to port 0 in order to access the Software Installation Program.

Figure 4
Cable connection



15 Observe the terminal screen.

The Software Installation Program is automatically invoked on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a “Help” facility to assist in making proper selections. However, if more detailed information is required, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

The following is a summary of the steps as described in that guide:

- a** Enter the system time and date if prompted. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears only when the Software Installation Program detects a system year date that is not in the range of 1995-2095.

- b** Select the type of upgrade to be performed.
 - **If** using the Software Delivery (PCMCIA) Card,
select
'System Upgrade'
from the Software Installation Main Menu

then select

'Option 11/11E to Option 11C'
from the Select type of upgrade to be performed menu.
 - **If** upgrading using the Software Daughterboard,
select
'New System Installation or Option 11/11E Upgrade - From
Software Daughterboard'.
- c** Select the feature set to be enabled.
 - Select the feature set from the 'Select Feature Set You Wish to
Enable' menu.
Note: The feature set selected must match the one provided with
keycodes.
- d** Select feature package numbers to be added (if any).
 - Enter package numbers. Press <cr> twice to end package
selection.
- e** Select the database source.
Select one of the following from the
'Select Option 11/11E Database Source' list;
 - Select
CCBR Restore file
If the customer database was extracted using the CCBR feature.
When this selection is chosen, the Data Transfer mode is
accessed. The data restoration and upgrading process is initiated
by entering <cr> when prompted to do so.

or
 - Select
Option 11/11E Software Cartridge
If the Database Upgrade tool is being used to extract the
customer database from the existing software cartridge.

- f Select the ISM parameters.
 - Compare the ISM parameters with those obtained in Step 3 on page 20.
 - Make any required changes.
- g Define the new AUX ID.
 - The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or Option 11E site ID.
- h Confirm the information entered and enter the validation keycodes.
 - A 'New Installation Information Summary' is displayed on the terminal.
 - Make any necessary changes to the information then enter the keycodes.
- i Complete the software installation when prompted.

CAUTION

If YES is entered, the system will reload (SYSLOAD) to complete the installation.

- 16 **Wait for the software installation the be completed.**
- 17 **If installed, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.**
- 18 **If the optional NTDK27 Ethernet cable is provided, connect it to the expansion connector in the cabinet (see Figure 4 on page 26).**
- 19 **If required, rearrange the tone and SDI functions.**

The NTDK20 SSC card consolidates many tone functions. Refer to "Chapter 5 - Assigning TDS/DTR, XTD and SDI functions" on page 117 for further information.
- 20 **Load overlay 43 (LD 43) and perform a data dump (EDD).**

————— *End of Procedure* —————

Restoring data due to an upgrade failure

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade attempt failed. To revert back, the Option 11 NTAK01 CPU/Conf card or Option 11E NTB45 System Core card and the software cartridge are inserted back into slot 0 of the main cabinet. The system is then reloaded.

Procedure 2— Reverting back to Option 11/11E

- 1 Remove all power from the system.**
- 2 Remove the NTDK20 SSC card from slot 0 in the main cabinet.**
- 3 If previously removed, attach the software cartridge to the NTAK01 CPU/Conf card or NTB45 System Core card.**
- 4 Insert the NTAK01 CPU/Conf card or the NTDK45 System Core card in slot 0 and power up the system.**
- 5 Restore the NTAK1118 SDI cable if previously equipped.**

End of Procedure

Chapter 3 - Upgrading a two-cabinet system equipped with metal cable

General information

This chapter describes how to upgrade an existing two-cabinet system interconnected with an NTAK1204 or NTAK1205 cable.

It also describes how to upgrade to fiber optic connection a previously upgraded two-cabinet Option 11C that remained interconnected with an NTAK1204 or NTAK1205 cable.

Upgrade without fiber optic connection

With the upgrade without fiber optic connection, the existing NTAK12 expansion cabinet is retained as well as the NTAK1204 or NTAK1205 interconnecting cable. The new system resulting from this upgrade provides all the features offered with Option 11C with the following limitations:

- There is no Ethernet capability.
- There is no fiber optic interconnect cable capability thus limiting the distance between the main and expansion cabinets to the length of the existing NTAK1204 or NTAK1205 cable.
- The size of the system is limited to two cabinets (a main cabinet and one expansion cabinet).

How to do an upgrade without fiber optic connection is described in Procedure 3 on page 38.

Upgrade with fiber optic connection

With the upgrade of fiber optic connectivity, the new system is capable of providing all the features offered by Option 11C without limitations. However, the existing NTAK12 expansion cabinet must be replaced with an NTAK11 cabinet and connected to the main cabinet with fiber optic cable.

How to do an upgrade with fiber optic connection is described in Procedure 4 on page 47.

Upgrade to fiber optic connection on a previously upgraded Option 11C without fiber connection

With this upgrade, a previously upgraded Option 11C without fiber optic connection (one that remained connected to an NTAK12 expansion cabinet with an NTAK1204 or NTAK1205 cable) is upgraded to one with fiber optic connection. This allows the system to provide all the features offered by Option 11C without limitations. However, the existing NTAK12 expansion cabinet must be replaced with an NTAK11 cabinet.

How to do an upgrade to fiber optic connection is described in Procedure 5 on page 72.

Summary of items required

To upgrade a two cabinet system to Option 11C, and the existing expansion cabinet is connected with an NTAK1204 or NTAK1205 expansion cable, the following items are required.

Upgrade without fiber optic connection

For an upgrade without fiber optic connection the following items are required:

- One NTDK20 Small System Controller (SSC) card
 - One NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable may already be present)
 - One NTDK26 Backwards Compatible Daughterboard
 - Release 22 or later software on a Software Daughterboard
 - Security Device
 - Keycode Data Sheet
 - A Personal Computer (PC) equipped with the CCBR feature to extract the customer data from the existing system
- or**
- A Database Upgrade Tool to extract the customer data from the cartridge on the existing system.

Note: The PC can be on site or located remotely.

Upgrade with fiber optic connection

For an upgrade with fiber optic connection the following items are required:

- One NTDK20 Small System Controller (SSC) card
- One NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable may already be present)
- Release 22 or later software on a Software Daughterboard
- Security Device
- Keycode Data Sheet

- A Personal Computer (PC) equipped with the CCBR feature to extract the customer data from the existing system
or
A Database Upgrade Tool to extract the customer data from the cartridge on the existing system

Note: The PC can be on site or located remotely

- One NTAK11 cabinet (part of the NTDK50 cabinet kit)
- Two Fiber Routing Guides
- One NTDK22 Fiber Expansion Daughterboard

Note: NTDK22 Fiber Expansion Daughterboard is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK24 (Multimode) or NTDK79 (Single Mode) Fiber Expansion Daughterboard if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One NTDK23 Fiber Receiver card

Note: NTDK23 Fiber Receiver card is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One A0632902 (formerly A0618443) Fiber Optic cable (only required with the NTDK22)

Note: This cable is only used with the NTDK22 daughterboard for distances up to 10 m (33 ft). A locally provided duplex glass fiber optic cable is required for distances up to 3 km (1.8 mi).

- One NTDK27 Ethernet cable (optional).

Upgrade to fiber optic connection on a previously upgraded Option 11C without fiber connection

For an NTAK12 expansion cabinet upgrade on a previously upgraded Option 11C the following items are required:

- One NTAK11 cabinet
- Two Fiber Routing Guides
- One NTDK22 Fiber Expansion Daughterboard

Note: NTDK22 Fiber Expansion Daughterboard is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK24 (Multimode) or NTDK79 (Single Mode) Fiber Expansion Daughterboard if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One NTDK23 Fiber Receiver card

Note: NTDK23 Fiber Receiver card is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One A0632902 (formerly A0618443) Fiber Optic cable (only required with the NTDK22)

Note: This cable is only used with the NTDK22 daughterboard for distances up to 10 m (33 ft). A locally provided glass fiber optic cable is required for distances up to 3 km (1.8 mi).

- One NTDK27 Ethernet cable (optional).

Upgrading to Option 11C

Summary of steps

Upgrade without fiber optic connection

The following list is a summary of the steps which should be followed when upgrading a two-cabinet Option 11 or Option 11E to Option 11C without fiber optic cabinet interconnection.

- Perform a data dump (EDD) on the existing system.
- Extract the customer data from the existing system using the CCBR feature (unless the Database Upgrade Tool is being used).
- Install the NTDK20 Small System Controller (SSC) card equipped with NTBK26 Backwards Compatible Daughterboard
- Install the NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable will already be present)
- Load the new system software and customer data in the system

The steps are described in detail in Procedure 3 on page 38.

Upgrade with fiber optic connection

The following list is a summary of the steps which should be followed when upgrading a two-cabinet Option 11 or Option 11E to Option 11C with fiber optic cabinet interconnection.

- Perform a data dump (EDD) on the existing system.
- Extract the customer data from the existing system using the CCBR feature (unless the Database Upgrade Tool is being used).
- Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet
- Install the NTDK20 Small System Controller (SSC) card equipped with Fiber Expansion Daughterboard
- Install the NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable will already be present)
- Load the new system software and customer data in the system
- Replace the existing expansion cabinet with an NTAK11 cabinet

- Connect the expansion cabinet to the main cabinet

The steps are described in detail in Procedure 4 on page 47.

Upgrade to fiber optic connection on a previously upgraded Option 11C without fiber connection

The following list is a summary of the steps which should be followed when upgrading an NTAK12 expansion cabinet on a previously upgraded Option 11C system interconnected with an NTAK1204 or NTAK1205 cable to a fiber optic connection.

- Perform a data dump (EDD)
- Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet
- Install the fiber expansion daughterboard on the NTDK20 Small System Controller (SSC) card
- Replace the existing expansion cabinet with an NTAK11 cabinet
- Connect the expansion cabinet to the main cabinet

The steps are described in detail in Procedure 4 on page 47.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment such as line cards. If additional expansion cabinets or other equipment is to be added as part of the upgrade to Option 11C, complete the upgrade as described in this chapter first. Once the system has been upgraded, refer to the Option 11C Installation guide for information about adding expansion cabinets and other equipment to an existing Option 11C system.

Upgrade procedure

Upgrade without fiber optic connection

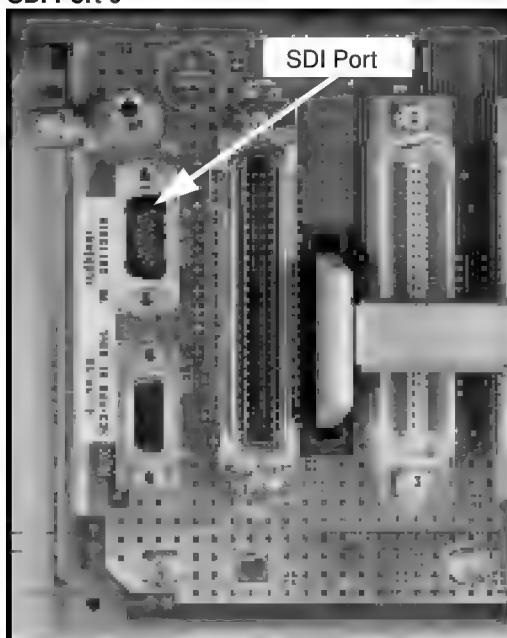
The following procedure (Procedure 3 on page 38) describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C without fiber optic cabinet interconnection.

Procedure 3— Upgrade without fiber optic connection to Option 11C

- 1 **Connect a TTY terminal to SDI Port 0 of the existing system.**

The terminal must be connected to SDI Port 0 (see Figure 5 on page 38).

Figure 5
SDI Port 0



2 Login to the system and perform a Data Dump on the existing system.

This step must be performed. It is to make sure that any changes that were made since the last Data Dump are backed up. This is a precautionary measure in case the upgrade fails and you must revert to the former system.

- a) Load Overlay program 43 (LD 43)
- b) Enter command EDD
- c) Once the Data Dump is completed, exit LD 43 by entering ****.

3 Load overlay program 22 (LD 22) and print the ISM parameters. Make a note of the existing parameters.

At the "REQ" prompt type "SLT" <CR> to print the ISM parameters. The ISM parameters should also be indicated on the existing software cartridge.

4 Disregard this step and go to Step 5 on page 40 if using the Database Upgrade Tool to extract customer database from the existing system. Perform this step to extract the customer data from the existing system using the CCBR feature and a PC.

- a) To extract the data with the CCBR feature:
- b) Using a PC, login to the existing Option 11.
- c) Load overlay 43 and enter XBK to start a configuration data backup.
- d) At the INFO prompt, enter a name for the file (up to 128 characters).
- e) Once the backup is completed, enter XVR to verify the backed up data.
- f) Once the data is verified, exit LD 43 by entering ****.

Note: Refer to the Option 11 *Customer Configuration Backup and Restore guide* for details about the CCBR feature.

5 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

6 Attach the antistatic bracelet provided at the bottom of the cabinet to your wrist.

7 Remove the NTAK01 CPU/Conf or NTB45 System Core card from the cabinet.

8 Set the baud rate switches on the new NTDK20 SSC card to match the settings on the NTAK01 CPU/Conf or NTB45 System Core card that was removed.

9 Remove the jumper plug from connector J7 on the component side of the NTDK20 SSC card as shown in Figure 6 on page 41.

Note: Store the jumper plug in a secure location. It may be required in the future if an expansion cabinet using fiber optic cable is installed. The J7 connector plug is required to activate the ethernet capability (which is not available with copper connected cabinets).

CAUTION

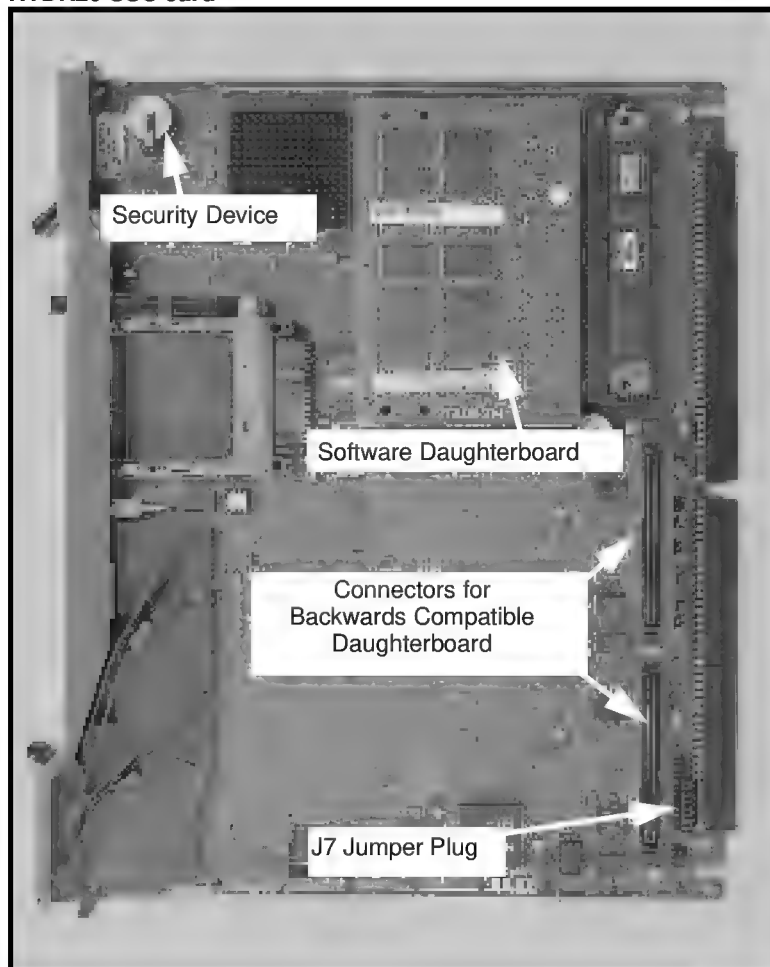
The NTDK20 SSC card is equipped with components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

10 Make sure that the J7 connector plug (see Step 9 on page 40) has been removed.

Install the NTDK26 Backwards Compatible Daughterboard on the NTDK20 SSC card as shown in Figure 6 on page 41.

11 Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card as shown in Figure 6 on page 41.

Figure 6
NTDK20 SSC card



- 12** **Install the new NTDK20 SSC card in the slot vacated by the NTAK01 or NTBK45 card (Slot 0).**

- 13 Skip this step and go to Step 14 on page 42 if the Database Upgrade Tool is not being used to extract the customer database from the existing system.**

Note: Perform this step only if the Database Upgrade Tool is to be used instead of a PC to extract the customer database from the existing system.

Install the Software Cartridge from the existing system to the Database Upgrade Tool.

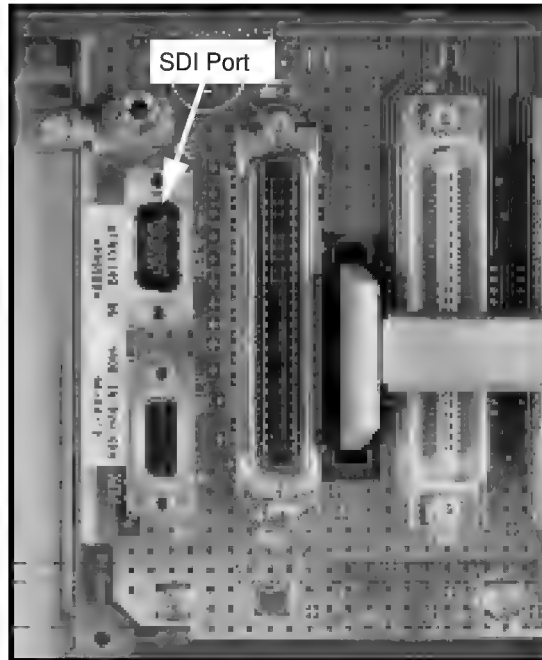
- a) Remove the Software Cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card
 - b) Connect the Option 11 or Option 11E Software Cartridge to the connector on the Database Upgrade Tool.
 - c) With the software cartridge on the Database Upgrade Tool facing towards the left, insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.
- 14 If not previously installed, install the NTBK48 three-port SDI cable to SDI port. Connect the TTY terminal to the connector on the NTBK48 cable labeled 'Port 0' (see Figure 7 on page 43).**

Note: Since this cable is also used with Option 11E systems, it should already be present when upgrading from Option 11E.

CAUTION

The TTY must be connected to port 0 in order to access the Software Installation Program.

Figure 7
Cable connection



15 Reconnect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

16 Observe the terminal screen.

The Software Installation Program is invoked automatically on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a "Help" facility to assist in making proper selections. However, if more detailed information is required, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

The following is a summary of the steps as described in the aforementioned guide:

Enter the system time and date if prompted. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears only when the Software Installation Program detects a system year date that is not in the range of 1995-2095.

d) Select the type of upgrade to be performed.

- **If** using the Software Delivery (PCMCIA) Card, select 'System Upgrade' from the Software Installation Main Menu

Then select

'Option 11/11E to Option 11C'
from the Select type of upgrade to be performed menu.

- **If** upgrading using the Software Daughterboard, select 'New System Installation or Option 11/11E Upgrade - From Software Daughterboard'.

e) Select the feature set to be enabled.

- Select the feature set from the 'Select Feature Set You Wish to Enable' menu.

Note: The feature set selected must match the one provided with keycodes.

- f) Select feature package numbers to be added, if any.
 - Enter package numbers. Press <cr> twice to end package selection.
- g) Select the database source.
Select one of the following from the 'Select Option 11/11E Database Source' list;
 - Select
CCBR Restore file
if the customer database was extracted using the CCBR feature.
When this selection is chosen, the Data Transfer mode is accessed. The data restoration and upgrading process is initiated by entering <cr> when prompted to do so.
 - or**
 - Select
Option 11/11E Software Cartridge
if the Database Upgrade tool is being used to extract the customer database from the existing software cartridge.
- h) Select the ISM parameters.
 - Compare the ISM parameters with those obtained in Step 3. Make any required changes.
- i) Define the new AUX ID.
 - The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or Option 11E site ID.
- j) Confirm the information entered and enter the validation keycodes.
 - A 'New Installation Information Summary' is displayed on the terminal.
 - Make any necessary changes to the information then enter the keycodes.
- k) Complete the software installation when prompted.

CAUTION

If YES is entered, the system will reload (SYSLOAD) to complete the installation.

- 17 Wait for the software installation the be completed.**
- 18 Load overlay program 43 (LD 43) and perform a data dump.**
- 19 If required, rearrange the tone and SDI functions.**

The NTDK20 SSC card consolidates many tone functions. Refer to “Chapter 5 - Assigning TDS/DTR, XTD and SDI functions” on page 117 for further information.

End of Procedure

Upgrade with fiber optic connection

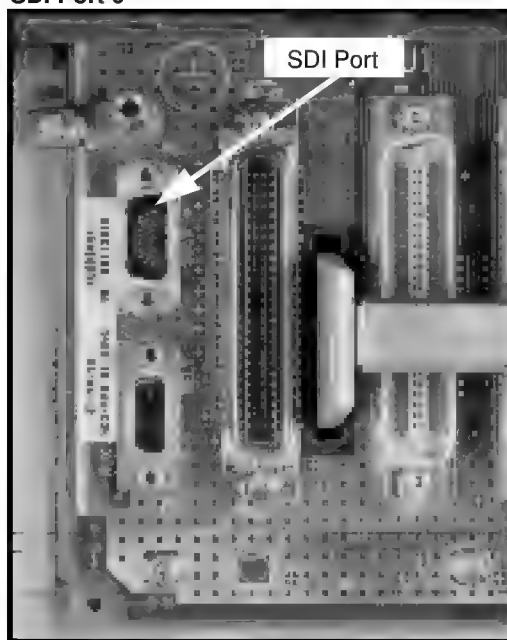
The following procedure (Procedure 4 on page 47) describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C with fiber optic cabinet interconnection.

Procedure 4— Upgrade with fiber optic connection to Option 11C

1 Connect a TTY terminal to SDI Port 0 of the existing system.

The terminal must be connected to SDI Port 0 (see Figure 8 on page 47).

Figure 8
SDI Port 0



2 Login to and perform a Data Dump on the existing system.

This step must be performed. It is to make sure that any changes that were made since the last Data Dump are backed up. This is a precautionary measure in case the upgrade fails and you must revert to the former system.

- a) Login to the system and load Overlay program 43 (LD 43)
- b) Enter command EDD
- c) Wait until the data dump is completed.

3 Log into the system and load overlay 22 to print the ISM parameters. Make a note of the existing parameters.

At the "REQ" prompt type "SLT" <CR> to print the ISM parameters.

The ISM parameters should also be indicated on the existing software cartridge.

4 Disregard this step and go to Step 5 on page 49 if using the Database Upgrade Tool to extract customer database from the existing system.

Perform this step to extract the customer data from the existing system using the CCBR feature and a PC.

- a) To extract the data with the CCBR feature:
- b) Using a PC, login to the existing Option 11.
- c) Load overlay 43 and enter XBK to start a configuration data backup.
- d) At the INFO prompt, enter a name for the file (up to 128 characters).
- e) Once the backup is completed, enter XVR to verify the backed up data.
- f) Once the data is verified, exit LD 43 by entering ****.

Note: Refer to the Option 11 *Customer Configuration Backup and Restore guide* for details about the CCBR feature.

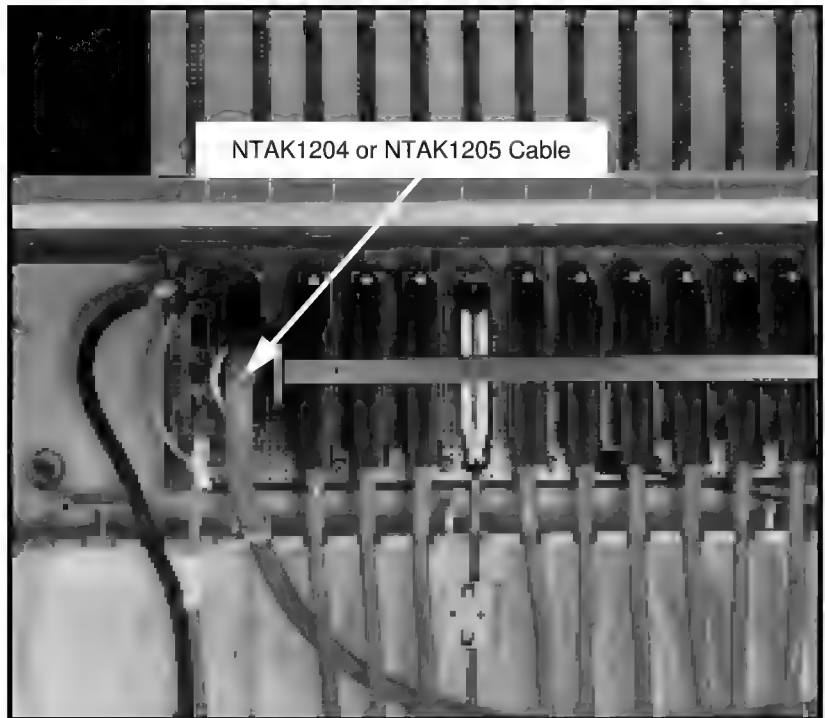
5 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

6 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 9 on page 49).

Figure 9
NTAK1204 or NTAK1205 cable connection



7 Remove the ground connection from the ground lug in the main cabinet.

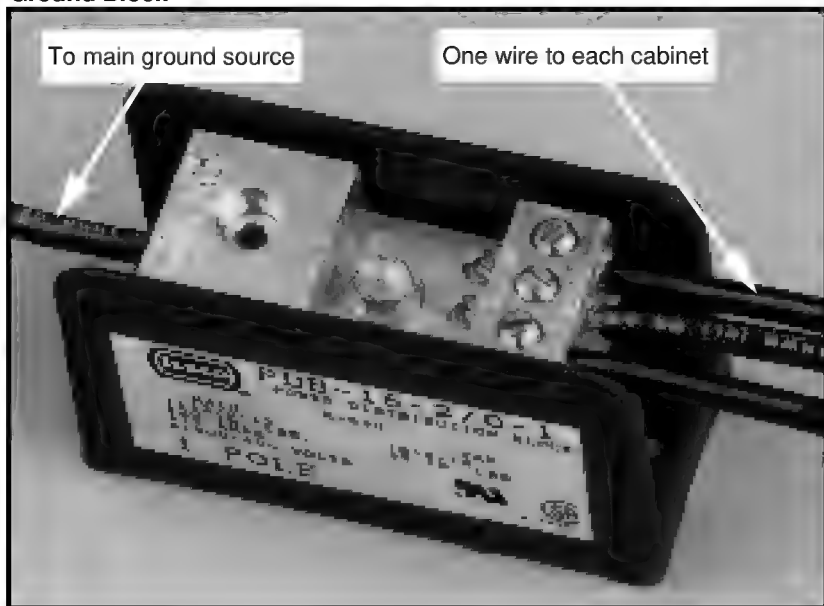
- 8 **Install a ground block in the vicinity of the main cabinet. Re-route the ground wire to the ground block then install a ground wire from the block to the ground lug in the main cabinet (see Figure 10 on page 50).**

Note: Grounding methods vary depending on the type of cross connecting terminal used. In certain cases (such as with the Krone Test Jack Frame used in some countries) an NTBK80 grounding bar may not be required. Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* that came with the system for more information.

Use 6 AWG (40 Metric) ground wire. For more information on grounding, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

Note: Do not install a ground wire to the existing expansion cabinet. This will be done when the new expansion cabinet is in place.

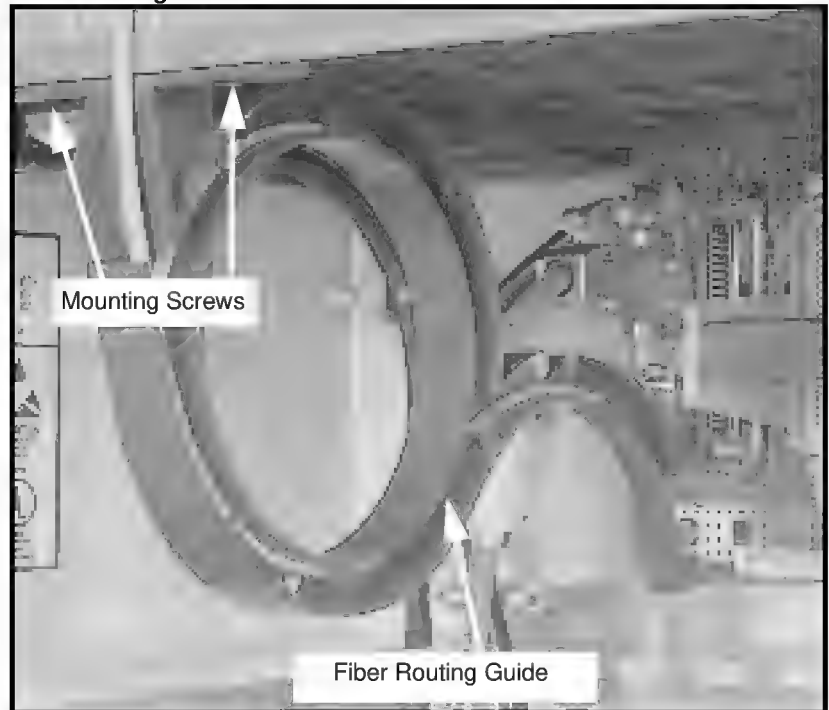
Figure 10
Ground Block



- 9 Install a Fiber Routing Guide beneath slot 0 (CPU) as shown in Figure 11 on page 51.**

The Fiber Routing Guide is designed to be mounted in the cable connector area below the circuit cards. Secure the Router with the existing screws below the card slot.

Figure 11
Fiber Routing Guide

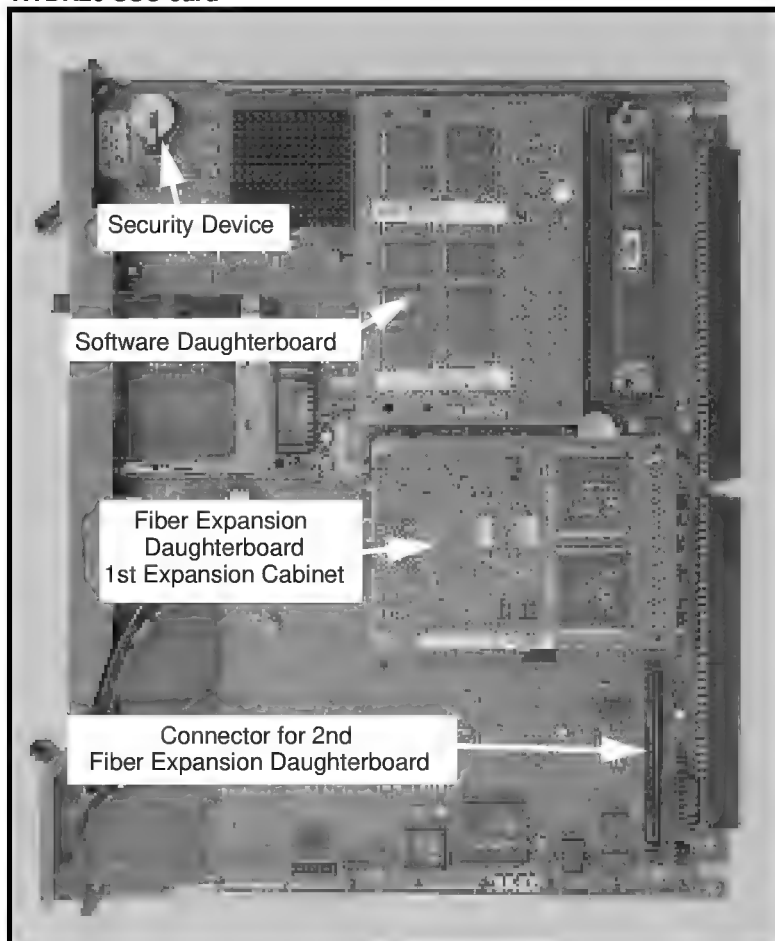


- 10 Remove the NTAK01 CPU/Conf or NTBK45 System Core card from the cabinet.**
- 11 Set the baud rate switches on the new NTDK20 SSC card to match the settings on the NTAK01 CPU/Conf or NTBK45 System Core card that was removed.**
- 12 Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card as shown in Figure 12 on page 53.**

CAUTION

The NTDK20 SSC card is equipped with components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 12
NTDK20 SSC card



13 Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for the expansion cabinet (see Figure 12 on page 53).

Connect the Fiber Expansion Daughterboard for the first expansion cabinet to the connector labeled 'Fiber 1'.

Note: If a second expansion cabinet is to be added as part of the upgrade, it may be preferable to install the second Fiber Expansion Daughter Board now to the connector labeled 'Fiber 2' to prevent additional down time later. Refer to the Option 11C Installation guide for detailed information about adding expansion cabinets to existing Option 11C systems.

14 Connect each fiber optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 13 on page 55.

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the A0632902 (formerly A0618443) cable, remove the two protective plugs from the Fiber Expansion Daughterboard. Connect the cable to the Fiber Expansion Daughterboard making sure that the 'V' shaped groove on the cable connector is facing outward and that the connector is fully seated. The mark (if equipped) on the connector should not be visible when properly connected. See Figure 14 on page 56.

If using glass fiber optic cable, remove the protective plug from the Fiber Expansion Daughterboard and remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber optic cable. Insert the plug in its designated connector on the daughterboard. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 15 on page 57. Repeat this procedure for the second fiber optic connection.

Figure 13
Fiber Optic Cable Connection (A0632902 cable shown)

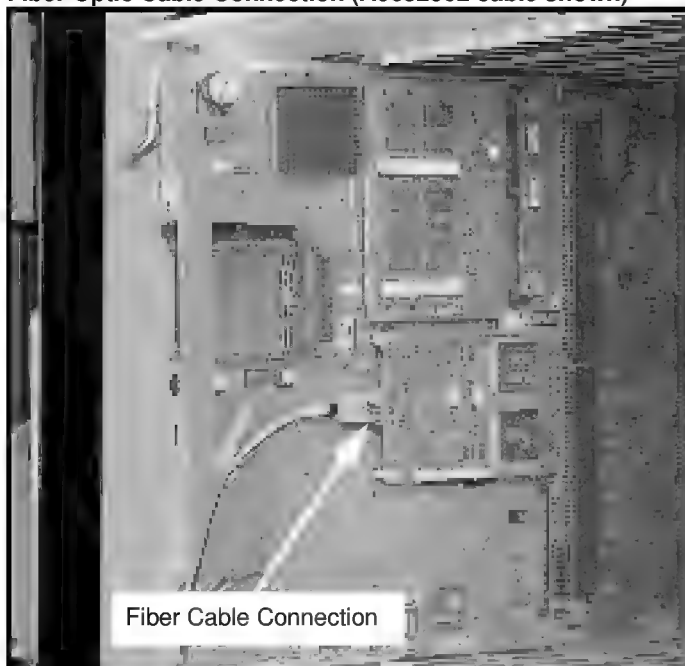


Figure 14
Plastic Fiber Optic Cable Connection

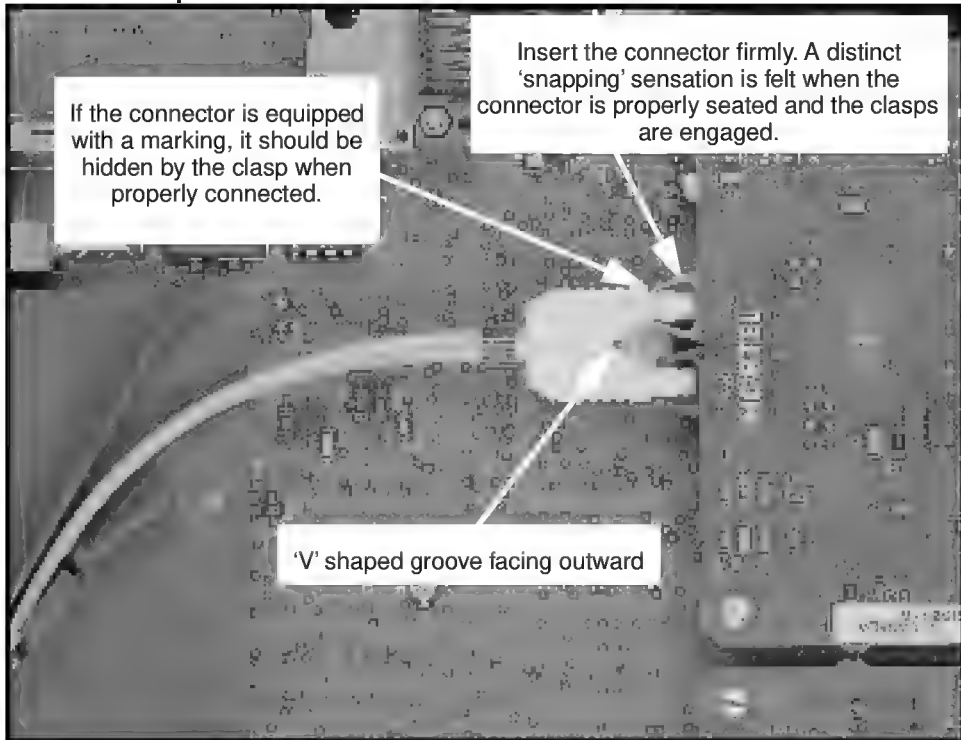


Figure 15
Glass Fiber Optic Cable Connection



- 15 Route each fiber optic cable through the Fiber Routing Guide.**

An A0632902 (formerly A0618443) 10 m fiber optic cable is used to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

A glass fiber optic cable, supplied and installed by a local facilities provider, is required when connecting an expansion cabinet located up to (1.8 mi) from the main cabinet.

Note: Do not staple or twist fiber optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).
- 16 Install the new NTDK20 SSC card in the slot vacated by the NTAK01 or NTBK45 card (Slot 0).**

Store the excess fiber optic cable on the Fiber Routing Guide.

- 17 Skip this step and go to Step 42 on page 71 if the Database Upgrade Tool is not being used to extract the customer database from the existing system.**

Note: Perform this step only if the Database Upgrade Tool is to be used instead of a PC to extract the customer database from the existing system.

Install the Software Cartridge from the existing system to the Database Upgrade Tool.

- a)** Remove the Software Cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card
- b)** Connect the Option 11 or Option 11E Software Cartridge to the connector on the Database Upgrade Tool. See Figure 16 on page 59.
- c)** With the software cartridge on the Database Upgrade Tool facing towards the left, insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 17 on page 60.

Figure 16
Database Upgrade Tool

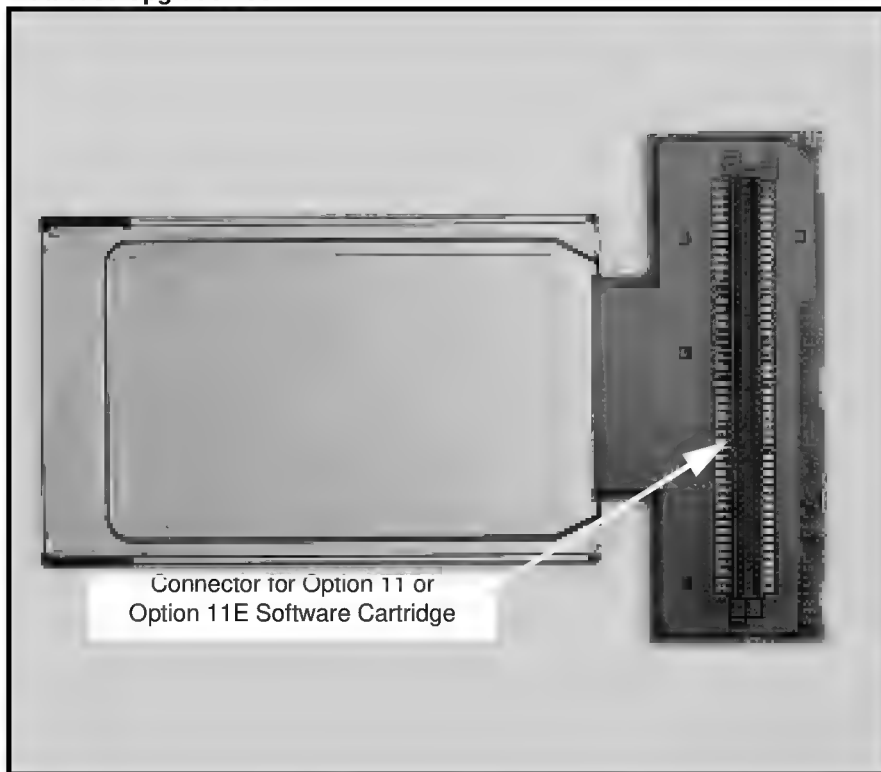
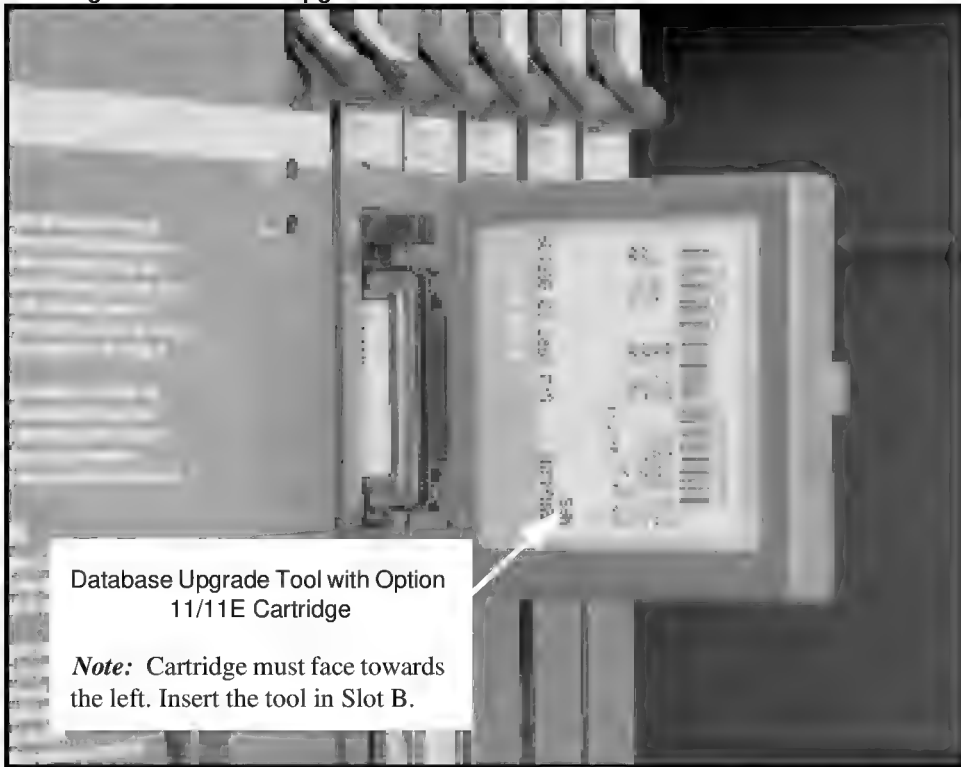


Figure 17
Cartridge and Database Upgrade Tool



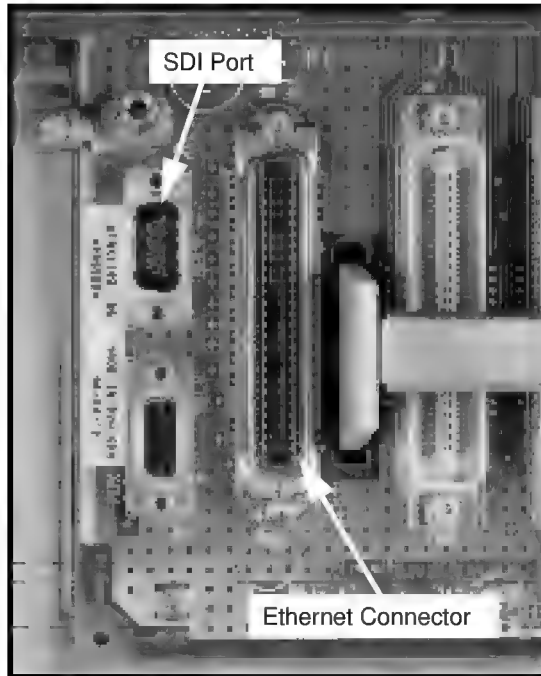
- 18** If not previously installed, install the NTBK48 three-port SDI cable to the SDI port. Connect the TTY terminal to the connector on the NTBK48 cable labeled 'Port 0' (see Figure 18 on page 61).

Note: Since this cable is also used with Option 11E systems, it should already be present when upgrading from Option 11E.

CAUTION

The TTY must be connected to port 0 in order to access the Software Installation Program.

Figure 18
Cable connection



19 Reconnect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

The Software Installation Program is invoked automatically on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a “Help” facility to assist in making proper selections. However, if more detailed information is required, refer to the Option 11C *Planning and Installation Guide* (553-3021-210).

20 Observe the terminal screen.

The Software Installation Program is invoked automatically on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a "Help" facility to assist in making proper selections. However, if more detailed information is required, refer to the Option 11C *Planning and Installation Guide (553-3021-210)*.

The following is a summary of the steps described in the aforementioned guide:

- a** Enter the system time and date if prompted. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears only when the Software Installation Program detects a system year date that is not in the range of 1995-2095.

- b** Select the type of upgrade to be performed.

- **If** using the Software Delivery (PCMCIA) Card, select 'System Upgrade' from the Software Installation Main Menu

Then select

'Option 11/11E to Option 11C'
from the Select type of upgrade to be performed menu.

- **If** upgrading using the Software Daughterboard, select 'New System Installation or Option 11/11E Upgrade - From Software Daughterboard'.

- c)** Select the feature set to be enabled.

- Select the feature set from the 'Select Feature Set You Wish to Enable' menu.

Note: The feature set selected must match the one provided with keycodes.

- d) Select feature package numbers to be added, if any.
 - Enter package numbers. Enter <cr> to end selection entry or if no packages are to be added.
- e) Select the database source.
Select one of the following from the
'Select Option 11/11E Database Source' list;
 - Select
CCBR Restore file
If the customer database was extracted using the CCBR feature.
When this selection is chosen, the Data Transfer mode is
accessed. The data restoration and upgrading process is initiated
by entering <cr> when prompted to do so.

Or

 - Select
Option 11/11E Software Cartridge
If the Database Upgrade tool is being used to extract the
customer database from the existing software cartridge.
- f) Select the ISM parameters.
 - Compare the ISM parameters with those obtained in Step 3. Make
any required changes.
- g) Define the new AUX ID.
 - The default AUX ID is the system ID provided with the Option 11C.
It should be replaced with the previous Option 11 or Option 11E
site ID.
- h) Confirm the information entered and enter the validation keycodes.
 - A 'New Installation Information Summary' is displayed on the
terminal.
 - Make any necessary changes to the information then enter the
keycodes.
- i) Complete the software installation when prompted.

21 Wait for the software installation to be completed.

CAUTION

If for any reason you must terminate the upgrade and revert back to the original Option 11 or Option 11E, do so now (see Procedure 6 on page 89). The remaining steps of this procedure involve major equipment changes making it difficult to revert back.

22 If installed, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.

23 Select 'Utilities' from the Software Installation Main Menu and perform a backup.

24 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.

Tag the cables J11, J12, J13 and so on.

25 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72 or NTDK78 power supply unit in the expansion cabinet.

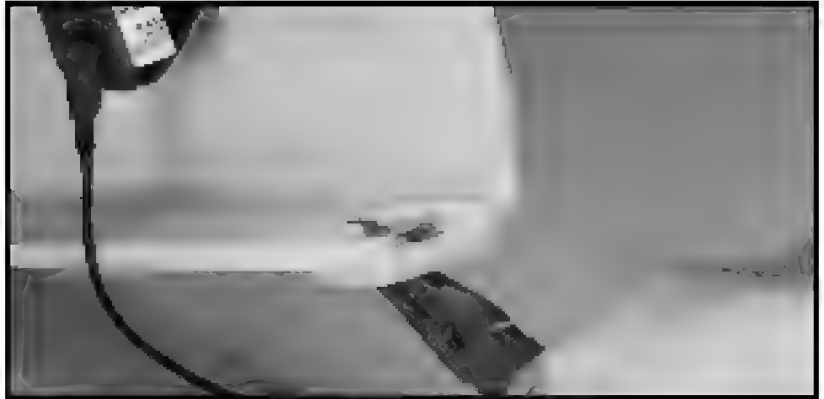
26 Remove the expansion cabinet from the wall (or pedestal).

Set the cabinet aside.

27 Mount the new NTAK11 Cabinet on the wall (or pedestal).

If the cabinet is to be mounted on a pedestal, the door hinge opening tabs on each side of the cabinet must first be removed with a pair of pliers as shown in Figure 19 on page 65.

Figure 19
Door hinge opening



- 28** **Connect a 6 AWG ground (40 Metric) ground wire from the ground lug in the expansion cabinet to the ground block installed in Step 8 on page 50.**
- 29** **Install a Fiber Routing Guide beneath slot 0 (Fbr Rx) as shown in Figure 11 on page 51.**

The Fiber Routing Guide is designed to be mounted in the cable connector area below the circuit cards. Secure the Router with the existing screws below the card slot.

30 **Reconnect all the cables that were tagged and disconnected from the old cabinet in Step 24 on page 64.**

Note that the connectors in the cabinet for cables going to the cross connect terminal are numbered J1 to J10 (instead of J11 to J20 as in the old expansion cabinet). The tagged cables should now be connected as shown in the following table:

Table 1
Cable tags and connectors

Tag on cable	Connect to connector
J11	J1
J12	J2
J13	J3
J14	J4
J15	J5
J16	J6
J17	J7
J18	J8
J19	J9
J20	J10

- 31 **Route the fiber optic cable from the main cabinet through the cable entry area of the expansion cabinet.**
- 32 **Put on the antistatic wrist strap located in the expansion cabinet.**
- 33 **Locate the Fiber Receiver card.**

Note: Use an NTDK23 Fiber Receiver card is when the expansion cabinet is within 10 m (33 ft) of the main cabinet and is connected with an A0632902 (formerly A0618443) plastic fiber optic cable. Use an NTDK25 (Multimode) or NTDK89 (Single Mode) Fiber Receiver card if the expansion cabinet is to be connected with glass fiber optic cable up to 3 km (1.8 mi) of the main cabinet.

34 Connect the fiber optic cable to the Fiber Receiver card as shown in Figure 20 on page 68.**WARNING**

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the A0632902 (formerly A0618443) cable, remove the two protective plugs from the Fiber Receiver card. Connect the cable to the Fiber Receiver card making sure that the 'V' shaped groove on the cable connector is facing inward and that the connector is fully seated. See Figure 21 on page 69. The mark (if equipped) on the connector should not be visible when properly connected.

If using glass fiber optic cable, remove the protective plug from the Fiber Receiver card and remove the protective cap from the corresponding plug (Tx or Rx) on the fiber optic cable. Insert the plug in its designated connector on the Fiber Receiver card. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 22 on page 70. Repeat this procedure for the second fiber optic connection.

Once connected, wind excess fiber optic cable around the spool on the Fiber Receiver card. Leave enough slack to insert and remove the Fiber Receiver card from its slot.

Figure 20
Fiber optic cable (A0632902 shown) connector on Fiber Receiver card

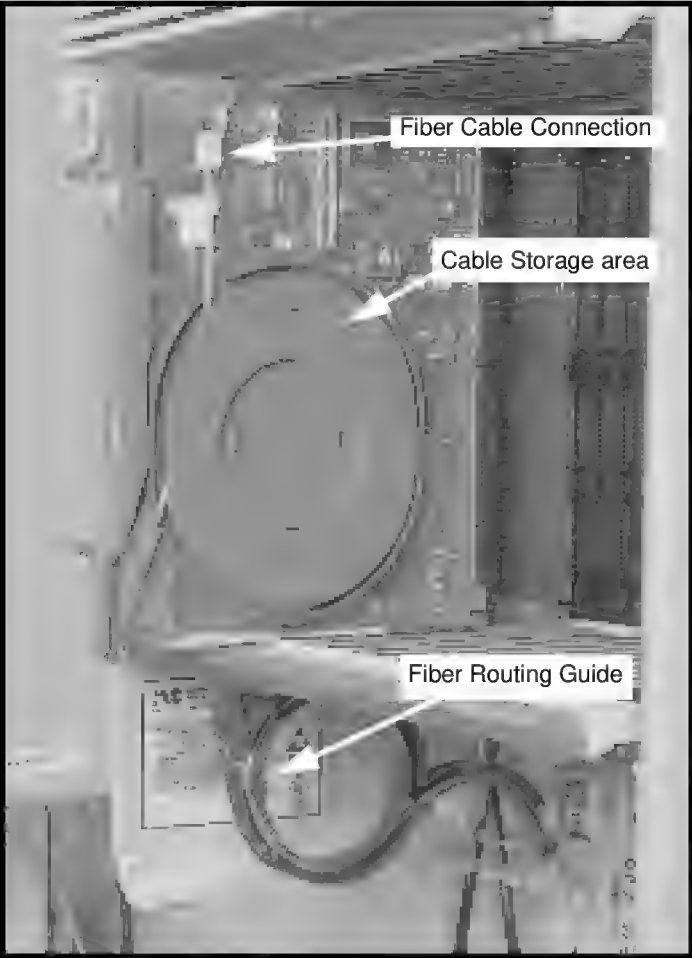


Figure 21
Plastic fiber optic cable connection

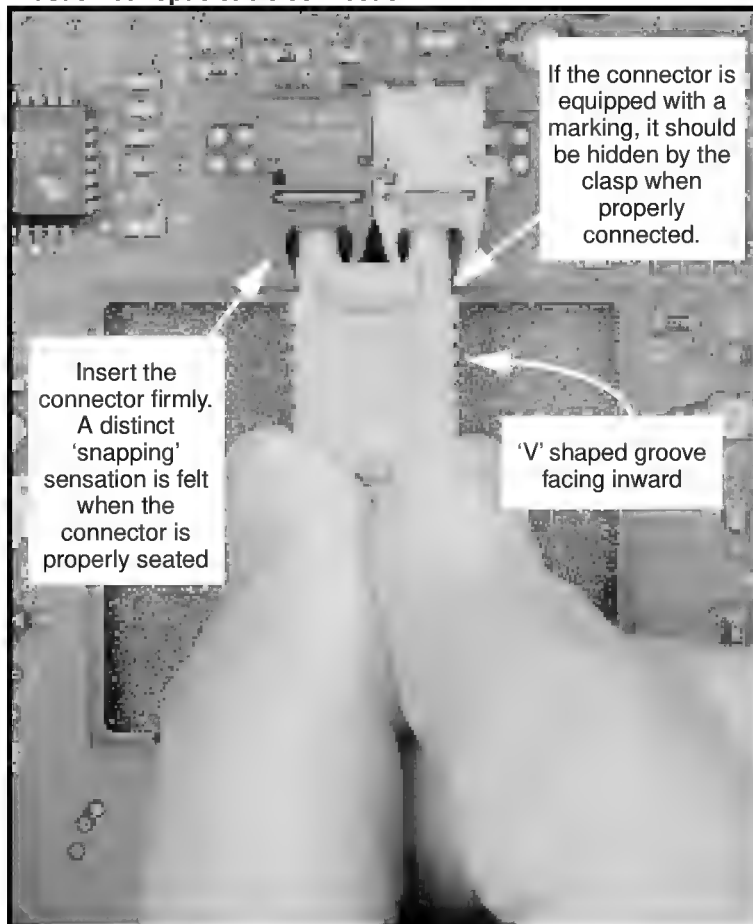
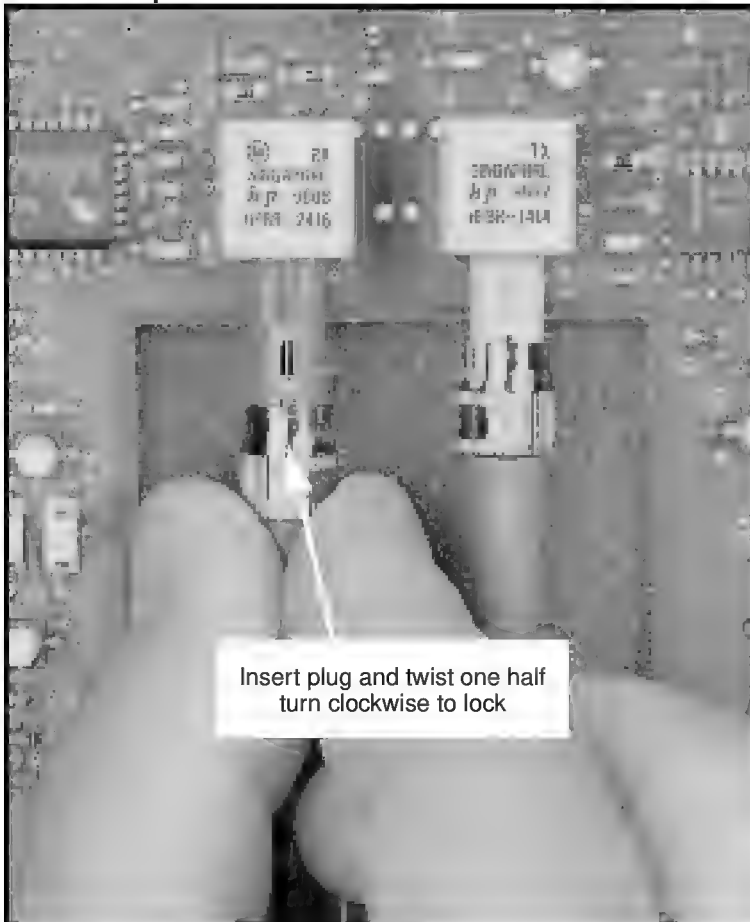


Figure 22
Glass fiber optic cable connection



- 35 **Install the Receiver card in the slot designated Fbr Rcvr.**
Wind the slack fiber optic cable around the Fiber Routing Guide once.
- 36 **Remove the NTAK04, NTDK78, NTAK05 or NTDK72 power supply from the old cabinet and install it in the new expansion cabinet. Connect the power cord to the bottom of the power supply unit.**
- 37 **Remove any circuit cards that are to be retained from the old expansion cabinet and install in the corresponding slots in the new cabinet.**

38 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

39 Check the fiber related LEDs on the SSC card.

The LED for the equipped Expansion Daughterboard should be **green**.

If it is **red** (disabled indication);

Load overlay program 135 and enter ENL FL1 to enable expansion cabinet 1 (or ENL FL2 for expansion cabinet 2, if equipped).

If the LED is **yellow** (fault indication):

Check all fiber optic cable to make sure that it is properly connected and not damaged. If the LED remains yellow, go to the *Option 11C fault Clearing Guide*.

40 If required, rearrange the tone and SDI functions.

The NTDK20 SSC card consolidates many tone functions. Refer to “Chapter 5 - Assigning TDS/DTR, XTD and SDI functions” on page 117 for further information.

41 If required, install the single port TTY cable in the expansion cabinet (Figure 18 on page 61).**42 If the optional NTDK27 Ethernet cable is required, connect it to the expansion connector in the main cabinet (see Figure 18 on page 61).**

End of Procedure

Upgrade to fiber optic connection on a previously upgraded Option 11C without fiber connection

The following procedure (Procedure 5 on page 72) describes how to upgrade to a fiber optic connection a two cabinet system that was previously upgraded to Option 11C, but remained connected to the expansion cabinet with an NTAK1204 or NTAK1205 intercabinet cable.

Procedure 5—Upgrading to fiber optic connection

1 Login and perform a Data Dump on the existing system.

This step must be performed. It is to make sure that any changes that were made since the last Data Dump are backed up.

- a)** Login to the system and load Overlay program 43 (LD 43)
- b)** Enter command EDD
- c)** Wait until the data dump is completed.

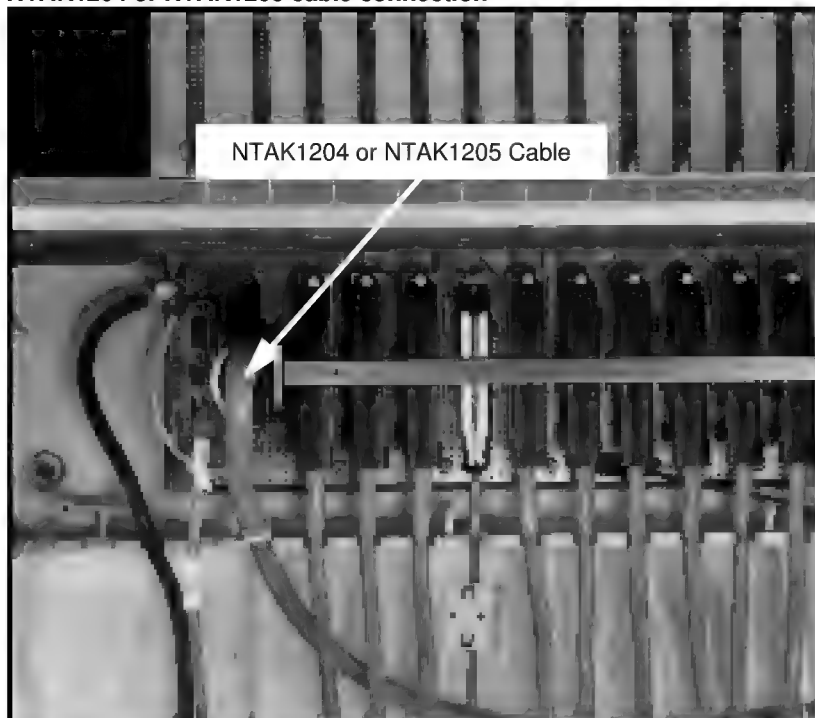
2 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

3 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 23 on page 73).

Figure 23
NTAK1204 or NTAK1205 cable connection



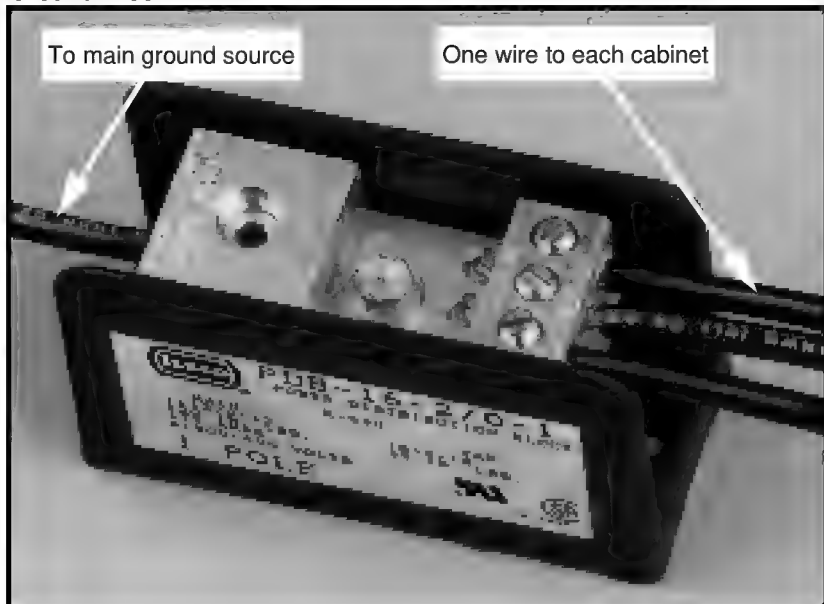
- 4 Remove the ground connection from the ground lug in the main cabinet.
- 5 Install a ground block in the vicinity of the main cabinet. Re-route the ground wire to the ground block then install a ground wire from the block to the ground lug in the main cabinet (see Figure 24 on page 74).

Note: Grounding methods vary depending on the type of cross connecting terminal used. In certain cases (such as with the Krone Test Jack Frame used in some countries) an NTBK80 grounding bar may not be required. Refer to the Option 11C *Planning and Installation Guide* (553-3021-210) that came with the system for more information.

Use 6 AWG (40 Metric) ground wire. For more information on grounding, refer to the Option 11C *Planning and Installation Guide* (553-3021-210).

Note: Do not install a ground wire to the existing expansion cabinet. This will be done when the new expansion cabinet is in place.

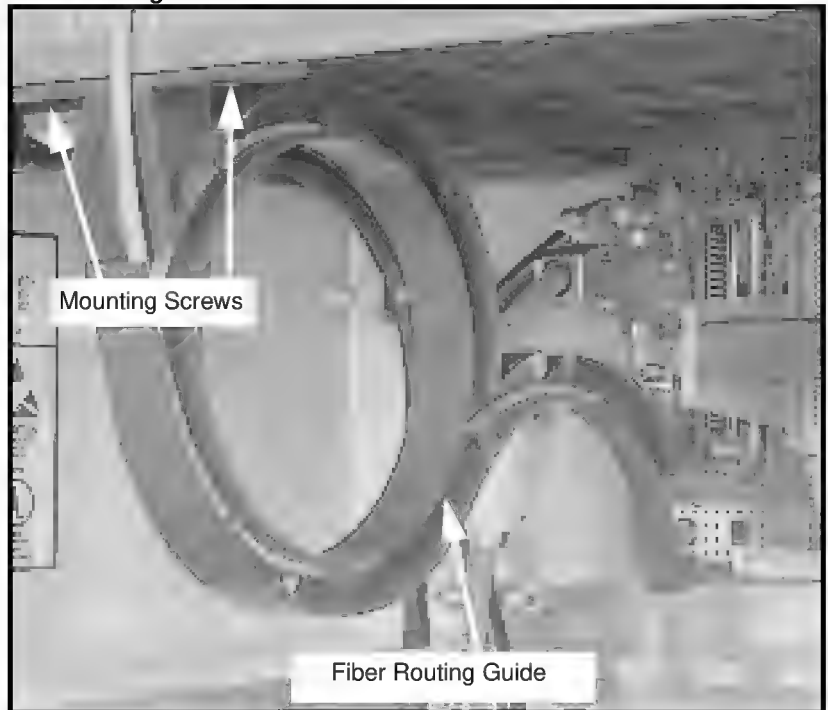
Figure 24
Ground Block



- 6 Install a Fiber Routing Guide beneath slot 0 (CPU) as shown in Figure 25 on page 75.**

The Fiber Routing Guide is designed to be mounted in the cable connector area below the circuit cards. Secure the Router with the existing screws below the card slot.

Figure 25
Fiber Routing Guide



- 7 Put on the antistatic strap located in the main cabinet.
- 8 Remove the NTDK20 SSC card from the main cabinet and install a Fiber Expansion Daughterboard for the expansion cabinet (see Figure 26 on page 77).

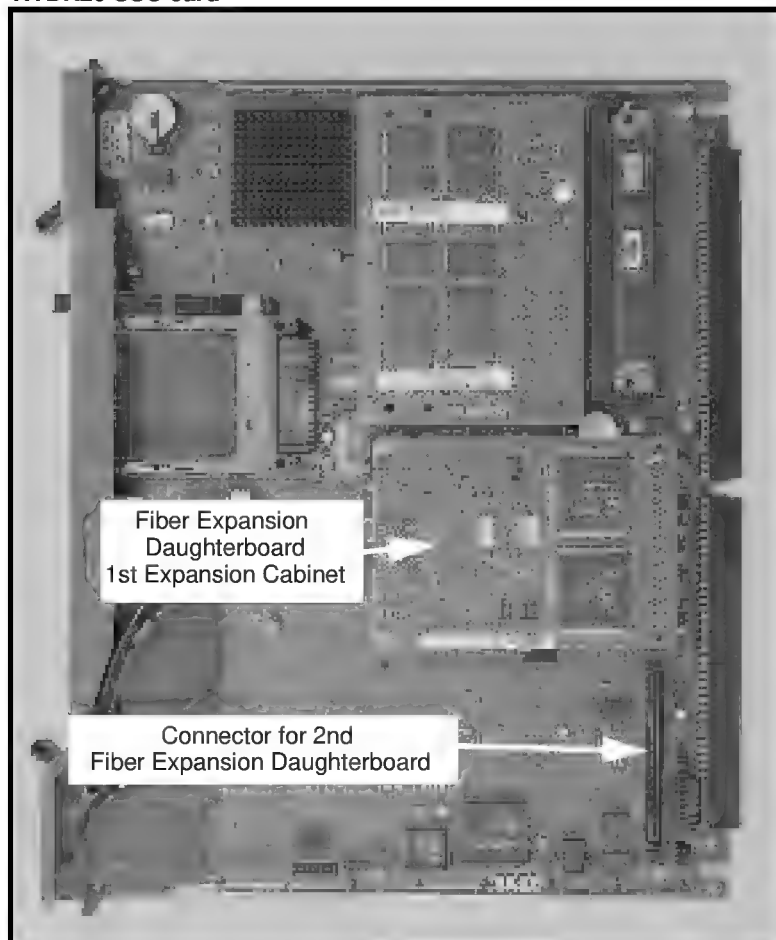
CAUTION

The NTDK20 SSC card is equipped with components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Connect the Fiber Expansion Daughterboard for the first expansion cabinet to the connector labeled 'Fiber 1'.

Note: If a second expansion cabinet is to be added as part of the upgrade, it may be preferable to install the second Fiber Expansion Daughter Board now to the connector labeled 'Fiber 2' to prevent additional down time later. Refer to the Option 11C Installation guide for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 26
NTDK20 SSC card



9 Connect each fiber optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 27 on page 79.

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the A0632902 (formerly A0618443) cable, remove the two protective plugs from the Fiber Expansion Daughterboard. Connect the cable to the Fiber Expansion Daughterboard making sure that the 'V' shaped groove on the cable connector is facing outward and that the connector is fully seated. The mark (if equipped) on the connector should not be visible when properly connected. See Figure 28 on page 80.

If using glass fiber optic cable, remove the protective plug from the Fiber Expansion Daughterboard and remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber optic cable. Insert the plug in its designated connector on the daughterboard. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 29 on page 81. Repeat this procedure for the second fiber optic connection.

Figure 27
Fiber Optic Cable Connection (A0632902 cable shown)

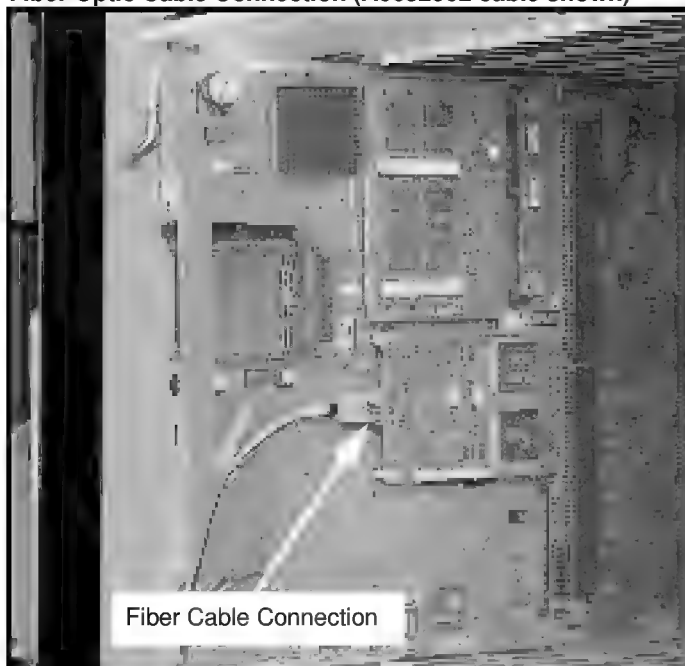


Figure 28
Plastic Fiber Optic Cable Connection

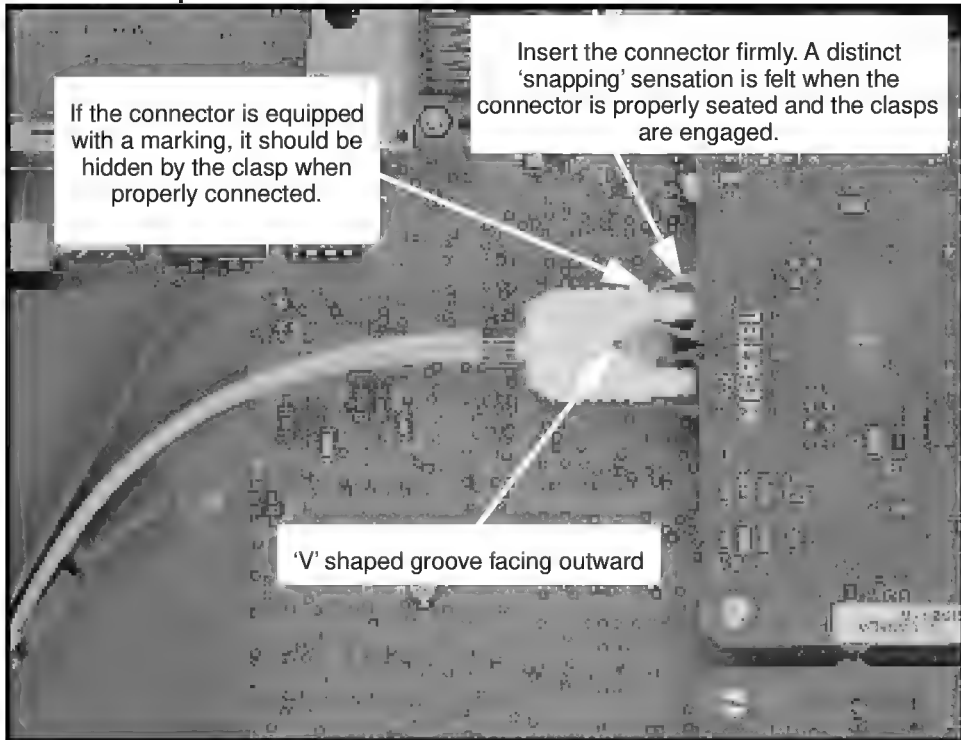


Figure 29
Glass Fiber Optic Cable Connection



- 10 Route each fiber optic cable through the Fiber Routing Guide.**

An A0632902 (formerly A0618443) 10 m fiber optic cable is used to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

A glass fiber optic cable, supplied and installed by a local facilities provider, is required when connecting an expansion cabinet located up to (1.8 mi) from the main cabinet.

Note: Do not staple or twist fiber optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).
- 11 Install the new NTDK20 SSC card in its slot (Slot 0).**

Store the excess fiber optic cable on the Fiber Routing Guide.

12 Reconnect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

13 Wait for the system reload (SYSLOAD) to be completed.

14 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.

Tag the cables J11, J12, J13 and so on.

15 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72 or NTDK78 power supply unit in the expansion cabinet.

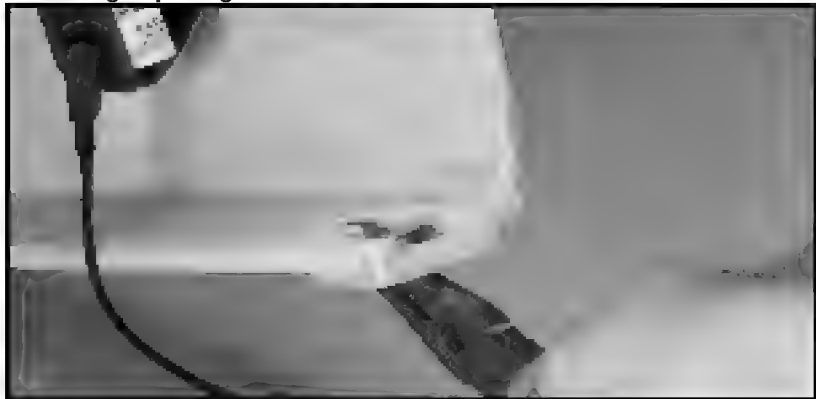
16 Remove the expansion cabinet from the wall (or pedestal).

Set the cabinet aside.

17 Mount the new NTAK11 Cabinet on the wall (or pedestal).

If the cabinet is to be mounted on a pedestal, the door hinge opening tabs on each side of the cabinet must first be removed with a pair of pliers as shown in Figure 30 on page 82.

Figure 30
Door hinge opening



18 Connect a 6 AWG ground (40 Metric) ground wire from the ground lug in the expansion cabinet to the ground block installed in Step 5 on page 74.

- 19 Install a Fiber Routing Guide beneath slot 0 (Fbr Rx) as shown in Figure 25 on page 75.**

The Fiber Routing Guide is designed to be mounted in the cable connector area below the circuit cards. Secure the Router with the existing screws below the card slot.

- 20 Reconnect all the cables that were tagged and disconnected from the old cabinet in Step 14 on page 82.**

Note that the connectors in the cabinet for cables going to the cross connect terminal are numbered J1 to J10 (instead of J11 to J20 as in the old expansion cabinet). The tagged cables should now be connected as shown in the following table:

Table 2
Tagged cable connections

Tag on cable	Connect to connector
J11	J1
J12	J2
J13	J3
J14	J4
J15	J5
J16	J6
J17	J7
J18	J8
J19	J9
J20	J10

- 21 Route the fiber optic cable from the main cabinet through the cable entry area of the expansion cabinet.**
- 22 Put on the antistatic wrist strap located in the expansion cabinet.**

23 Locate the Fiber Receiver card.

Note: Use an NTDK23 Fiber Receiver card is when the expansion cabinet is within 10 m (33 ft) of the main cabinet and is connected with an A0632902 (formerly A0618443) plastic fiber optic cable. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if the expansion cabinet is to be connected with glass fiber optic cable up to 3 km (1.8 mi) of the main cabinet.

24 Connect the fiber optic cable to the Fiber Receiver card as shown in Figure 31 on page 85.

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the A0632902 (formerly A0618443) cable, remove the two protective plugs from the Fiber Receiver card.

Connect the cable to the Fiber Receiver card making sure that the 'V' shaped groove on the cable connector is facing inward and that the connector is fully seated. See Figure 32 on page 86.

The mark (if equipped) on the connector should not be visible when properly connected.

If using glass fiber optic cable, remove the protective plug from the Fiber Receiver card and remove the protective cap from the corresponding plug (Tx or Rx) on the fiber optic cable.

Insert the plug in its designated connector on the Fiber Receiver card. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 33 on page 87.

Repeat this procedure for the second fiber optic connection.

Once connected, wind excess fiber optic cable around the spool on the Fiber Receiver card. Leave enough slack to insert and remove the Fiber Receiver card from its slot.

Figure 31
Fiber optic cable (A0632902 shown) connector on
Fiber Receiver card

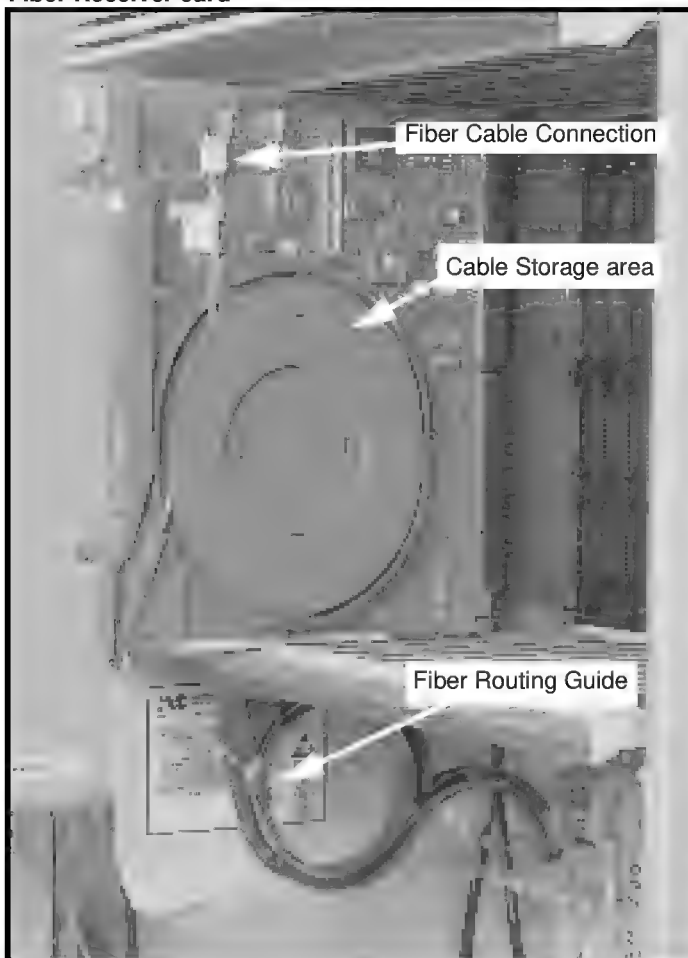


Figure 32
Plastic fiber optic cable connection

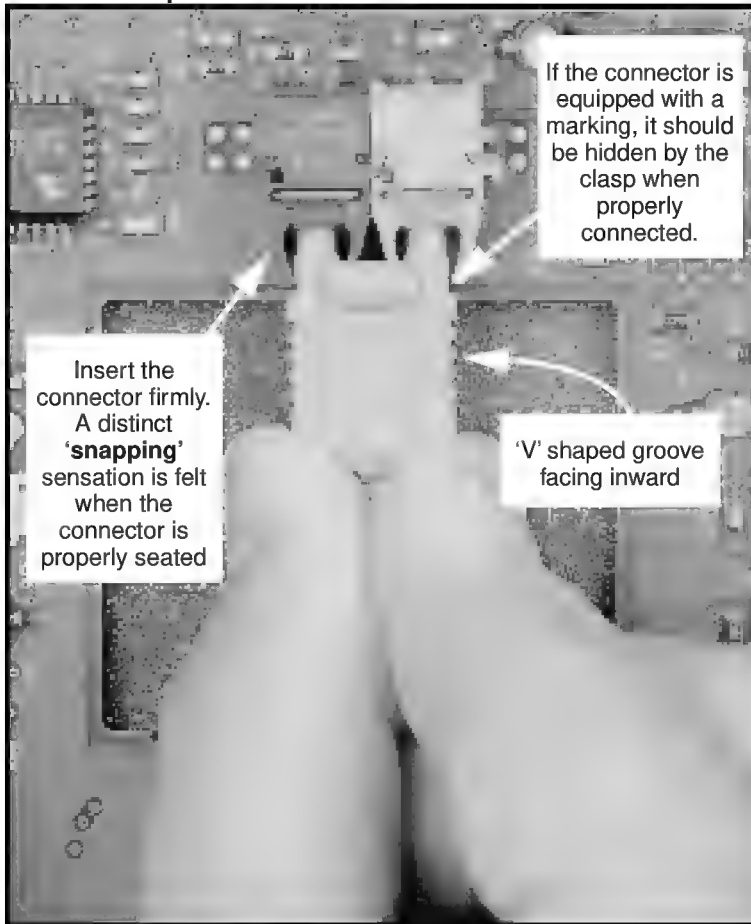
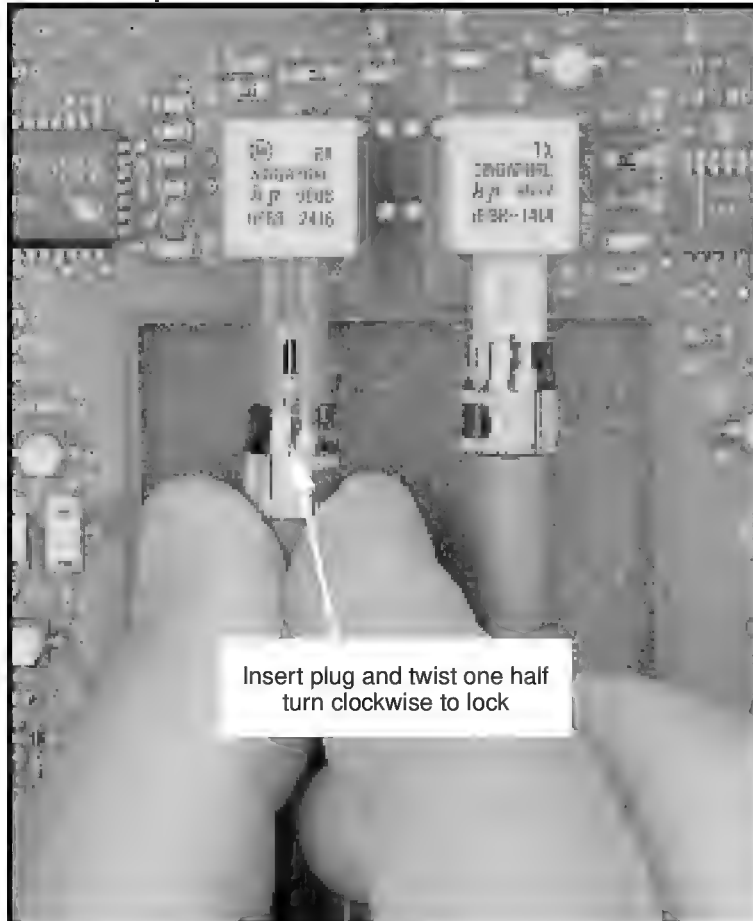


Figure 33
Glass fiber optic cable connection



- 25 **Install the Receiver card in the slot designated Fbr Rcvr.**
Wind the slack fiber optic cable around the Fiber Routing Guide once.
- 26 **Remove the NTAK04, NTAK05, NTDK72 or NTDK78 power supply from the old cabinet and install it in the new expansion cabinet.**
Connect the power cord to the bottom of the power supply unit.

27 Remove any circuit cards that are to be retained from the old expansion cabinet and install in the corresponding slots in the new cabinet.

28 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

29 Check the fiber related LEDs on the SSC card.

The LED for the equipped Expansion Daughterboard should be **green**.

If it is **red** (disabled indication);

Load overlay program 135 and enter ENL FL1 to enable expansion cabinet 1 (or ENL FL2 for expansion cabinet 2, if equipped).

If the LED is **yellow** (fault indication):

Check all fiber optic cable to make sure that it is properly connected and not damaged. If the LED remains yellow, go to the *Option 11C fault Clearing Guide*.

30 If the optional NTDK27 Ethernet cable is required, connect it to the expansion connector in the main cabinet (see Figure 18 on page 61).

End of Procedure

Restoring data due to an upgrade failure

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade attempt failed. To revert back, the Option 11 NTAK01 CPU/Conf card or Option 11E NTBK45 System Core card and the software cartridge is inserted back into slot 0 of the main cabinet and the system is reloaded.

Procedure 6— Reverting

- 1 Remove all power from the system**
- 2 Reconnect the NTAK1204 or NTAK1205 intercabinet cable (if it was previously disconnected).**
- 3 Remove the NTBK20 SSC card from slot 0 in the main cabinet.**
- 4 If previously removed, attach the software cartridge to the NTAK01 CPU/Conf card or NTBK45 System Core card.**
- 5 Insert the NTAK01 CPU/Conf card or the NTBK45 System Core card in slot 0 and power up the system.**
- 6 Restore the NTAK1118 SDI cable if previously equipped.**

————— *End of Procedure* —————

Chapter 4 — Upgrading an Option 11E equipped with fiber optic cable

General information

This chapter describes how to upgrade an existing two- or three-cabinet Option 11E interconnected with NTBK78 (A0618443 or A0632902) fiber optic cables.

Summary of items required

The the existing NTAK12 expansion cabinets used with the Option 11E cannot be reused with the Option 11C. These cabinets must be removed and replaced with NTAK11 cabinets. However, the main cabinet, power supply and all IPE circuit cards can be retained and used in the new system.

The following items are required to complete this upgrade:

- One NTDK20 Small System Controller (SSC) card
 - Release 22 or later software on a Software Daughterboard
 - Security Device
 - Keycode Data Sheet
 - A Personal Computer (PC) equipped with the CCBR feature to extract the customer data from the existing system
or
A Database Upgrade Tool to extract the customer data from the cartridge on the existing system
- Note:* The PC can be on site or located remotely.
- One NTAK11 cabinet for each existing NTAK12 expansion cabinet
 - One Fiber Routing Guide for each cabinet

- One NTDK22 Fiber Expansion Daughter board for each expansion cabinet

Note: NTDK22 Fiber Expansion Daughter board is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. NTDK24 (Multimode) or NTDK79 (Single Mode) Fiber Expansion Daughterboard if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One NTDK23 Fiber Receiver card for each expansion cabinet

Note: NTDK23 Fiber Receiver card is used when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- One NTDK27 Ethernet cable (optional)
- One NTAK1118 Single Port SDI cable for each expansion cabinet (optional).

Upgrading to Option 11C

Summary of steps

The following list is a summary of the steps which should be followed when upgrading a two- or three-cabinet Option 11E to Option 11C:

- Perform a data dump (EDD) on the existing system
- Extract the customer data from the existing system using the CCBP feature (unless the Database Upgrade Tool is being used)
- Disconnect the NTAK1204 or NTAK1205 cables from the main cabinet
- Install the NTDK20 Small System Controller (SSC) card with Fiber Expansion Daughterboard
- Load the new system software and customer data in the system
- Replace the existing expansion cabinets with an NTAK11 cabinets
- Connect the expansion cabinet to the main cabinet.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment such as line cards. If additional expansion cabinets or other equipment is to be added as part of the upgrade to Option 11C, complete the upgrade as described in this chapter first. Once the system has been upgraded, refer to the Option 11C *Planning and Installation Guide (553-3021-210)* for information about adding expansion cabinets and other equipment to an existing Option 11C system.

Upgrade procedure

The following procedure (Procedure 7 on page 94) describes how to upgrade a two- or three- cabinet Option 11 or Option 11E to Option 11C with fiber optic cabinet interconnection.

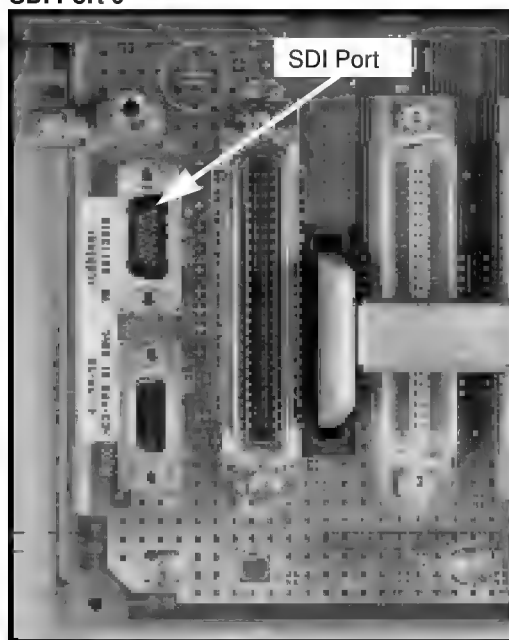
Procedure 7— Upgrading Option 11E to Option 11C

- 1 Connect a TTY terminal to SDI Port 0 of the existing system.

CAUTION

The TTY must be connected to SDI Port 0 (see Figure 34 on page 94) in order to access the Software Installation Program later in this procedure.

Figure 34
SDI Port 0



2 Login to the system and perform a Data Dump on the existing system.

This step must be performed. It is to make sure that any changes that were made since the last Data Dump are backed up. This is a precautionary measure in case the upgrade fails and you must revert to the former system.

- a) Load Overlay program 43 (LD 43)
- b) Enter command EDD
- c) Once the Data Dump is completed, exit LD 43 by entering *****,

3 Load overlay program 22 (LD 22) and print the ISM parameters. Make a note of the existing parameters.

3At the "REQ" prompt type "SLT" <CR> to print the ISM parameters.

The ISM parameters should also be indicated on the existing software cartridge.

4 Disregard this step and go to Step 5 on page 96 if using the Database Upgrade Tool to extract customer database from the existing system. Perform this step to extract the customer data from the existing system using the CCBR feature and a PC.

To extract the data with the CCBR feature:

- a) Using a PC, login to the existing Option 11.
- b) Load overlay 43 and enter XBK to start a configuration data backup.
- c) At the INFO prompt, enter a name for the file (up to 128 characters).
- d) Once the backup is completed, enter XVR to verify the backed up data.
- e) Once the data is verified, exit LD 43 by entering *****,

Note: Refer to the Option 11 *Customer Configuration Backup and Restore guide* for details about the CCBR feature.

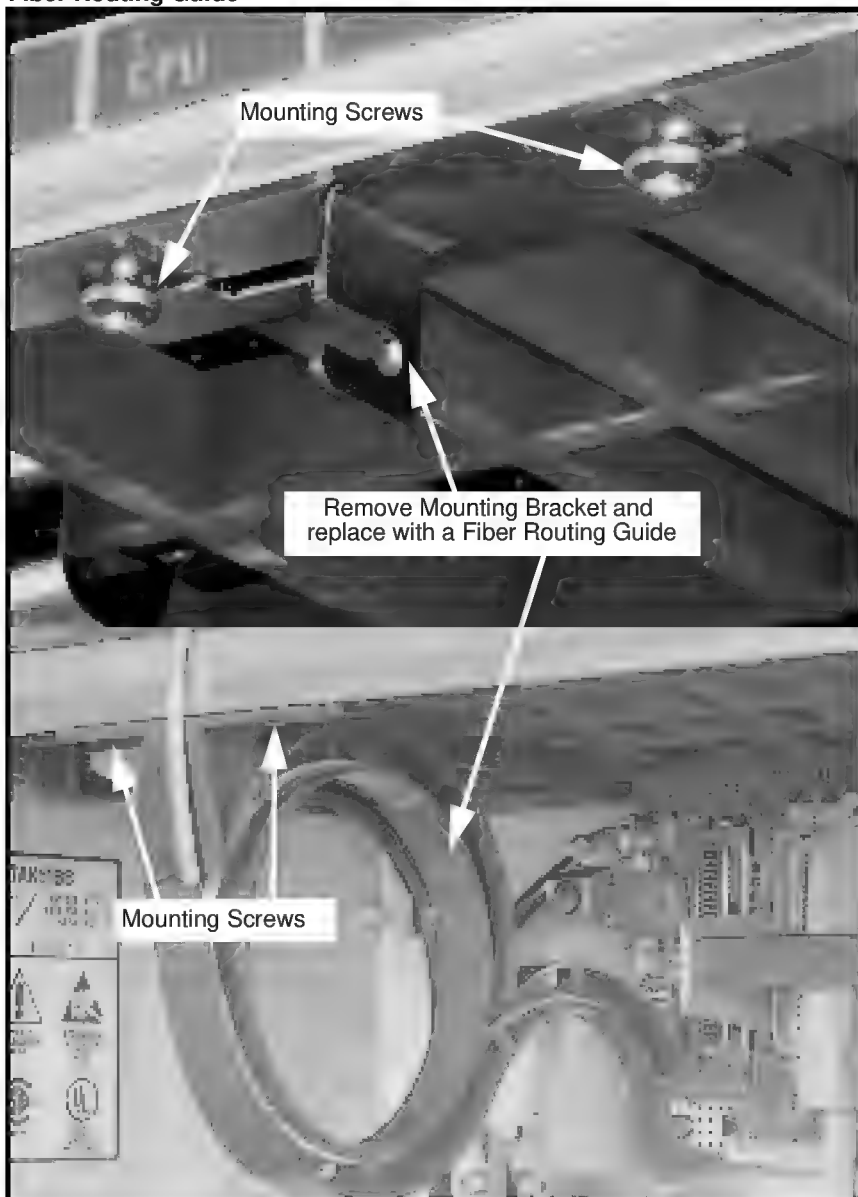
- 5 **Disconnect the power from the main and expansion cabinets.**

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.
- 6 **Disconnect the NTAK78 fiber optic cables from the MFI unit in the main cabinet (one for each expansion cabinet).**

Note: Do not remove this cable. It will be required for the new expansion cabinet.
- 7 **Disconnect the NTB62 fiber power cable from the MFI unit, from the cable to the battery backup unit (if provided) and from under the Power Supply unit.**
- 8 **If the cabinet is equipped with battery backup, reconnect the cable from the battery backup unit directly to the connector on the bottom of the Power Supply unit.**
- 9 **Remove the MFI from the cabinet.**
- 10 **Loosen the screws securing the MFI mounting bracket and remove the bracket (see Figure 35 on page 97).**
- 11 **Install a Fiber Routing Guide in the location vacated by the MFI mounting bracket. Tighten the screws (see Figure 35 on page 97).**

Figure 35
Fiber Routing Guide



- 12 **Remove the NTBK45 System Core card from the main cabinet.**
- 13 **Set the baud rate switches on the new NTDK20 SSC card to match the settings on the NTA01 CPU/Conf or NTBK45 System Core card that was removed.**
- 14 **Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card as shown in Figure 36 on page 99.**

CAUTION

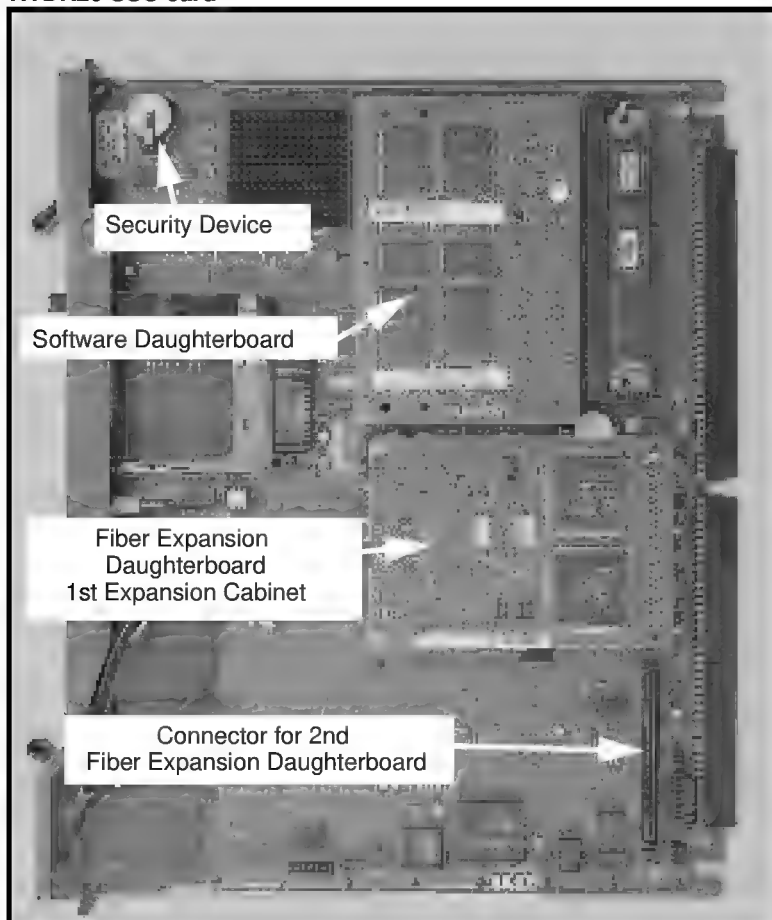
The NTDK20 SSC card is equipped with components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

- 15 **Install one Fiber Expansion Daughter Board on the NTDK20 SSC card for each expansion cabinet (see Figure 36 on page 99).**

Connect the Fiber Expansion Daughterboard for the first expansion cabinet to the connector labeled 'Fiber 1' and for the second expansion cabinet to connector 'Fiber 2'.

Note: If a second expansion cabinet is to be added as part of the upgrade, it may be preferable to install the second Fiber Expansion Daughter Board now to prevent additional down time later. Refer to the Option 11C Installation guide for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 36
NTDK20 SSC card



- 16 Connect each fiber optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 37 on page 101.**

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the NTBK78 (A0618443 or A0632902) cable, remove the two protective plugs from the Fiber Expansion Daughterboard. Connect the cable to the Fiber Expansion Daughterboard making sure that the 'V' shaped groove on the cable connector is facing outward and that the connector is fully seated.

The mark (if equipped) on the connector should not be visible when properly connected. See Figure 38 on page 102.

If using glass fiber optic cable, remove the protective plug from the Fiber Expansion Daughterboard and remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber optic cable.

Insert the plug in its designated connector on the daughterboard. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 39 on page 103.

Repeat this procedure for the second fiber optic connection.

Figure 37
Fiber Optic Cable Connection (A0632902 cable shown)

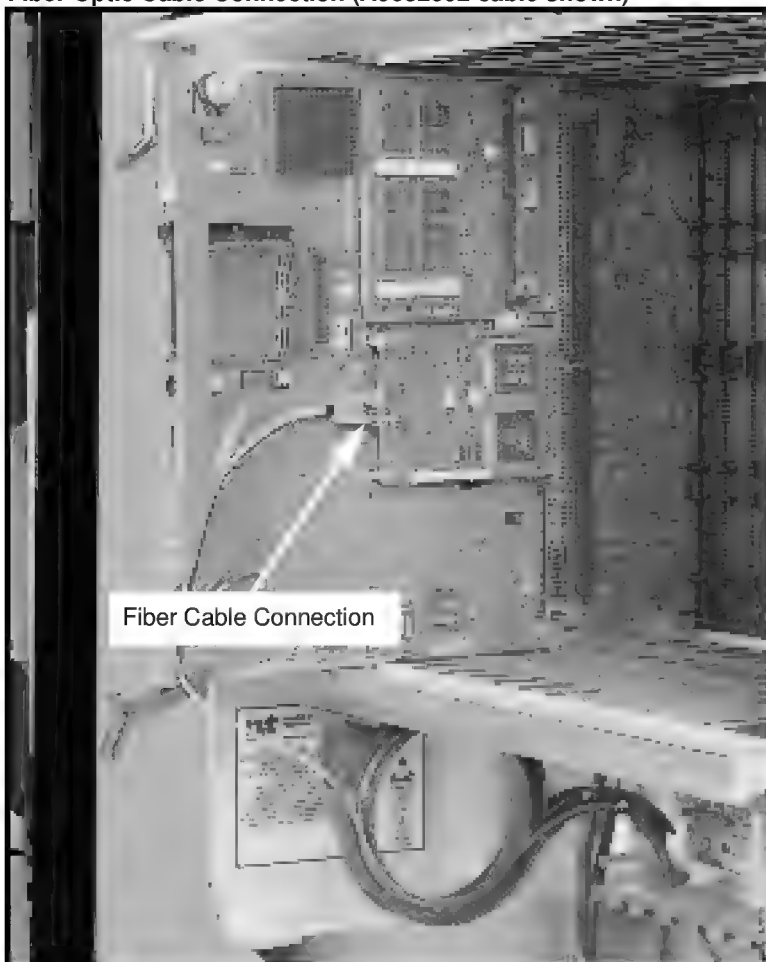


Figure 38
Plastic Fiber Optic Cable Connection

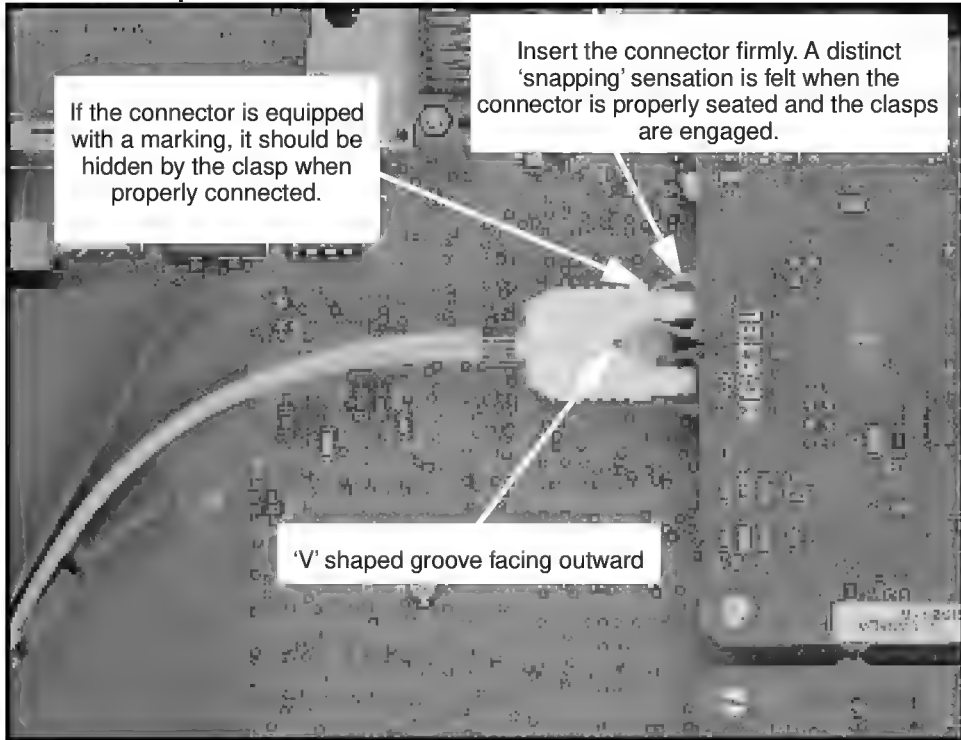


Figure 39
Glass Fiber Optic Cable Connection



17 Route each fiber optic cable through the Fiber Routing Guide.

An NTBK78 (A0632902) 10 m fiber optic cable is used to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

A glass fiber optic cable, supplied and installed by a local facilities provider, is required when connecting an expansion cabinet located up to 3 km (1.8 mi) from the main cabinet.

Note: Do not staple or twist fiber optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

18 Install the new NTDK20 SSC card in the slot vacated by the NTAK01 or NTBK45 card (Slot 0).

Store the excess fiber optic cable on the Fiber Routing Guide.

- 19 Skip this step and go to Figure 20 on page 104 if the Database Upgrade Tool is not being used to extract the customer database from the existing system.**

Note: Perform this step only if the Database Upgrade Tool is to be used instead of a PC to extract the customer database from the existing system.

Install the Software Cartridge from the existing system to the Database Upgrade Tool.

- a)** Remove the Software Cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card
- b)** Connect the Option 11 or Option 11E Software Cartridge to the connector on the Database Upgrade Tool.
- c)** With the software cartridge on the Database Upgrade Tool facing towards the left, insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.

- 20 Reconnect the power to the main cabinet.**

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

21 Observe the terminal screen.

The Software Installation Program is invoked automatically on power up.

Note: This program is menu driven allowing the easy installation of software and customer databases in the Option 11C. It is straight forward and includes a “Help” facility to assist in making proper selections. However, if more detailed information is required, refer to “Upgrading the software” on page 134.

The following is a summary of the steps described in “Upgrading the software” on page 134:

- a) Enter the system time and date if prompted. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears only when the Software Installation Program detects a system year date that is not in the range of 1995-2095.

- b) Select the type of upgrade to be performed.

- **If** using the Software Delivery (PCMCIA) Card, select
‘System Upgrade’
from the Software Installation Main Menu

Then select

‘Option 11/11E to Option 11C’
from the Select type of upgrade to be performed menu.

- **If** upgrading using the Software Daughterboard, select
‘New System Installation or Option 11/11E Upgrade - From Software Daughterboard’.

- c) Select the feature set to be enabled.
 - Select the feature set from the 'Select Feature Set You Wish to Enable' menu.

Note: The feature set selected must match the one provided with keycodes.
- d) Select feature package numbers to be added, if any.
 - Enter package numbers. Press <cr> twice to end package selection.
- e) Select the database source.

Select one of the following from the 'Select Option 11/11E Database Source' list;

 - Select CCBR Restore file if the customer database was extracted using the CCBR feature. When this selection is chosen, the Data Transfer mode is accessed. The data restoration and upgrading process is initiated by entering <cr> when prompted to do so.

Or

 - Select Option 11/11E Software Cartridge if the Database Upgrade tool is being used to extract the customer database from the existing software cartridge.
- f) Select the ISM parameters.
 - Compare the ISM parameters with those obtained in Step 3. Make any required changes.
- g) Define the new AUX ID.
 - The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or Option 11E site ID.

- h)** Confirm the information entered and enter the validation keycodes.
 - A 'New Installation Information Summary' is displayed on the terminal.
 - Make any necessary changes to the information then enter the keycodes.
- i** Complete the software installation when prompted.

22 Wait for the software installation to be completed.

CAUTION

If for any reason you must terminate the upgrade and revert back to the original Option 11E, do so now (see Procedure 8 on page 116). The remaining steps of this procedure involve major equipment changes making it difficult to revert back.

- 23 If installed, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.**
- 24 Load overlay program 43 (LD 43) and perform a data dump.**
- 25 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72 or NTDK78 power supply unit in each expansion cabinet.**
- 26 Tag and disconnect all cables from connectors J11 through J20 in the first expansion cabinet, and if equipped, the second expansion cabinet.**

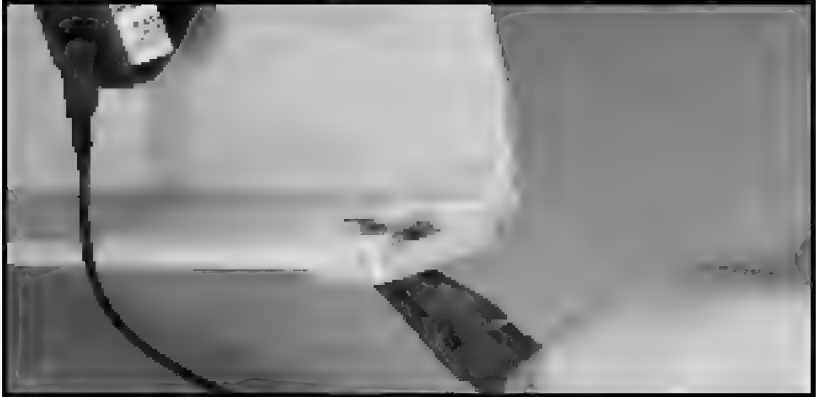
Tag the cables J11, J12, J13 and so on for the first expansion cabinet and J21, J22 and so on for the second cabinet.
- 27 Disconnect the NTBK78 (A0618443 or A0632902) Fiber Optic cable from EFI units in the expansion cabinets.**
- 28 Remove the expansion cabinets from the wall (or pedestal).**

Set the cabinets aside.

29 Mount the new NTAk11 Cabinets on the wall (or pedestal).

If the cabinet is to be mounted on a pedestal, the door hinge opening tabs on each side of the cabinet must first be removed with a pair of pliers as shown in Figure 40 on page 108.

Figure 40
Door hinge opening



30 Install a Fiber Routing Guide in each expansion cabinet beneath slot 0 (Fbr Rx) as shown in Figure 41 on page 111.

31 Reconnect all the cables that were tagged and disconnected from the old cabinets in step 26.

Note that the connectors in the cabinet for cables going to the cross connect terminal are numbered J1 to J10 (instead of J11 to J20 as in the old expansion cabinets). The tagged cables should now be connected as shown in the following table:

Table 3
Tagged cable connections

First Expansion Cabinet		Second Expansion Cabinet	
Tag on cable	Connect to connector	Tag on cable	Connect to connector
J11	J1	J21	J1
J12	J2	J22	J2
J13	J3	J23	J3
J14	J4	J24	J4
J15	J5	J25	J5
J16	J6	J26	J6
J17	J7	J27	J7
J18	J8	J28	J8
J19	J9	J29	J9
J20	J10	J30	J10

32 Put on the antistatic wrist strap located in the expansion cabinet.**33 Locate the Fiber Receiver card.**

Note: Use an NTDK23 Fiber Receiver card is when the expansion cabinet is within 10 m (33 ft) of the main cabinet and is connected with an NTBK78 (A0618443 or A0632902) plastic fiber optic cable. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if the expansion cabinet is to be relocated up to 3 km (1.8 mi) of the main cabinet.

- 34 In each expansion cabinet, connect the fiber optic cable to the Fiber Receiver card as shown in Figure 41 on page 111.**

WARNING

The fiber optic interface product used in Option 11C is considered safe. However, as a precaution do not view the optical port or the end of fiber optic cable. Under certain conditions (such as during cable testing or under light magnification) the cable or port may expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until ready to connect the cable.

If using the NTBK78 (A0618443 or A0632902) cable, remove the two protective plugs from the Fiber Receiver card. Connect the cable to the Fiber Receiver card making sure that the 'V' shaped groove on the cable connector is facing inward and that the connector is fully seated. See Figure 42 on page 112. The mark (if equipped) on the connector should not be visible when properly connected.

If using glass fiber optic cable, remove the protective plug from the Fiber Receiver card and remove the protective cap from the corresponding plug (Tx or Rx) on the fiber optic cable. Insert the plug in its designated connector on the Fiber Receiver card. Once inserted, lock the connector in place by turning it a half turn clockwise. See Figure 43 on page 113. Repeat this procedure for the second fiber optic connection.

Once connected, wind excess fiber optic cable around the spool on the Fiber Receiver card. Leave enough slack to insert and remove the Fiber Receiver card from its slot.

Figure 41
Receiver card and fiber connection

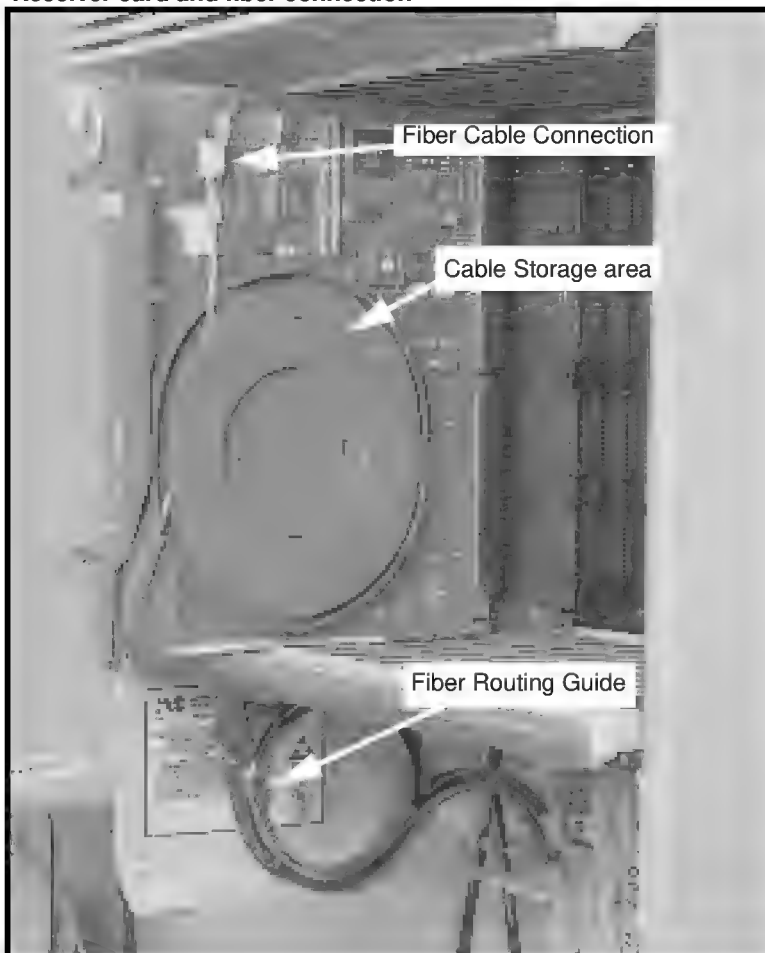


Figure 42
Plastic fiber optic cable connection

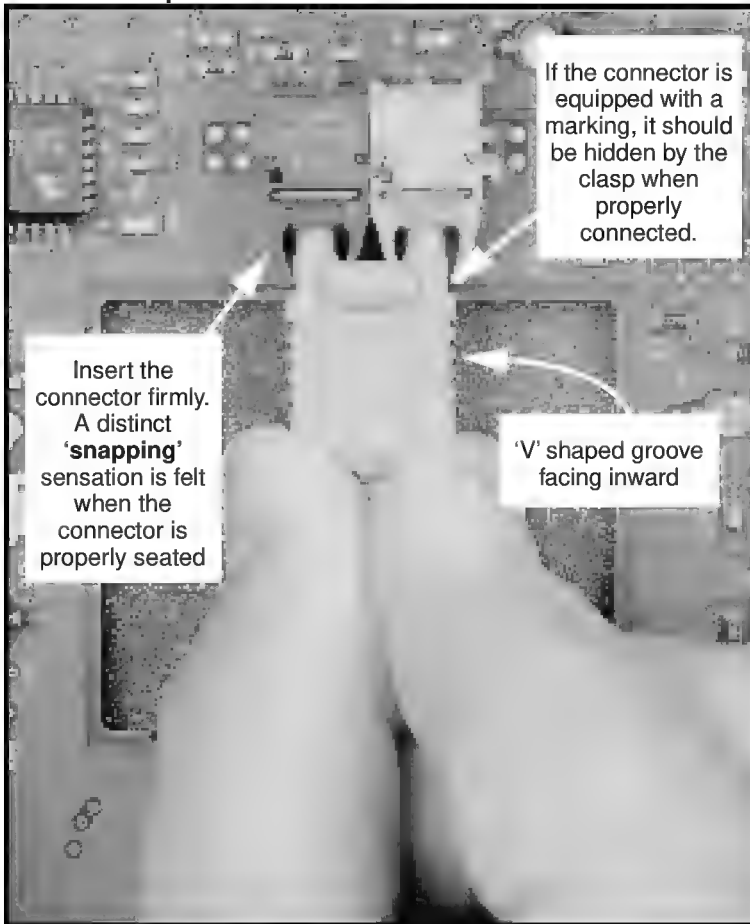
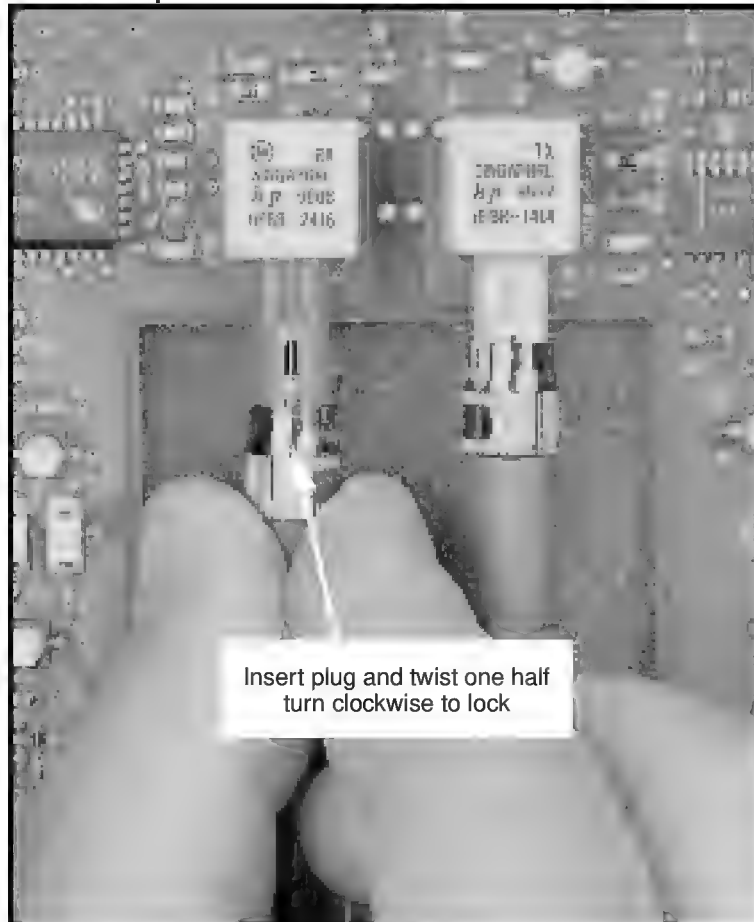


Figure 43
Glass fiber optic cable connection

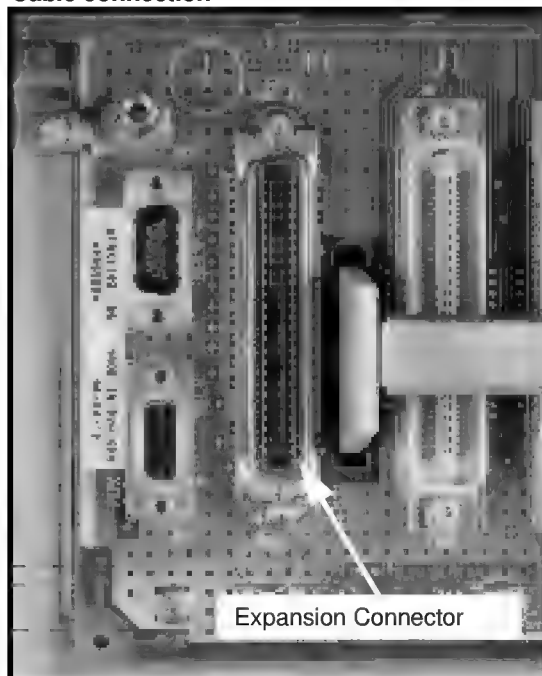


- 35 In each expansion cabinet, install the Fiber Receiver card in the slot designated Fbr Rcvr.**
Wind the slack fiber optic cable around the Fiber Routing Guide once.
- 36 Remove the NTAK04, NTAK05, NTDK72 or NTDK78 power supply from the old expansion cabinets and install it in the new expansion cabinets.**
Connect the power cord to the bottom of the power supply unit.

- 37 Remove any circuit cards that are to be retained from the old expansion cabinets and install in the corresponding slots in the new cabinets.**
- 38 Connect the power to the expansion cabinets.**
- Set the circuit breaker switch on the front of the power supply unit in each cabinet to ON.
- If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.
- 39 Check the fiber related LEDs on the SSC card.**
- The LED for the equipped Expansion Daughterboard should be **green**.
- If it is **red** (disabled indication);
Load overlay program 135 and enter ENL FL1 to enable expansion cabinet 1 (or ENL FL2 for expansion cabinet 2, if equipped).
- If the LED is **yellow** (fault indication):
Check all fiber optic cable to make sure that it is properly connected and not damaged. If the LED remains yellow, go to the *Option 11C fault Clearing Guide*.
- 40 If required, rearrange the tone and SDI functions.**
- The NTDK20 SSC card consolidates many tone functions. Refer to “Chapter 5 - Assigning TDS/DTR, XTD and SDI functions” on page 117 for further information.
- 41 If required, install the single port TTY cable in the expansion cabinet (Figure 44 on page 115).**
- 42 If required, install the NTDK27 Ethernet cable to the expansion connector in the cabinet (see Figure 44 on page 115).**

End of Procedure

Figure 44
Cable connection



Restoring data due to an upgrade failure

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade attempt failed. To revert back, the Option 11 NTAK01 CPU/Conf card or Option 11E NTBK45 System Core card and the software cartridge is inserted back into slot 0 of the main cabinet and the system is reloaded.

Procedure 8— Reverting

- 1 Remove all power from the system**
- 2 Reconnect the NTAK1204 or NTAK1205 intercabinet cable (if it was previously disconnected).**
- 3 Remove the NTDK20 SSC card from slot 0 in the main cabinet.**
- 4 If previously removed, attach the software cartridge to the NTBK45 System Core card.**
- 5 Insert the NTAK01 CPU/Conf card or the NTBK45 System Core card in slot 0 and power up the system.**
- 6 Restore the NTAK1118 SDI cable if previously equipped.**

————— *End of Procedure* —————

Chapter 5 - Assigning TDS/DTR, XTD and SDI functions

General information

This chapter describes how to assign the TDS/DTR, XTD and SDI functions to the NTDK20 Small System Controller (SSC) card.

Note: This Chapter applies only if there are tone related circuit cards remaining in the system.

The NTDK20 Small System Controller (SSC) card replaces the NTAK01 CPU/Conf card (used in Option 11) and the NTBK45 System Core card (used in Option 11E). It is also capable of providing the tone functions that are provided by the NTAK03 TDS/DTR card, the NT5K20 XTD card, the NT5K card, the NTAG26 XMFR card, and the NT5K48 XTD card. The SDI function is also incorporated in the NTDK20 SSC card.

Once the system has been upgraded to Option 11C the functions of any remaining TDS/DTR and XTD cards can be rearranged as follows:

- Any remaining NTAK03 TDS/DTR, NT5K20 XTD, NT5K21, NTAG26 XMFR, NT5K48 XTD cards can be removed and their functions assigned to the NTDK20 SSC card.

Note: Minimum vintage must be NTAK03DA.

- Some of their functions can be moved to the NTDK20 SSC card.
- Additional functions can be assigned to the NTDK20 SSC card.

Summary of procedures

The following procedures in this Chapter describe how to rearrange the tone and SDI functions to meet the various requirements of the Option 11C. They are:

- Procedure 9 “Removing the NTAK03 TDS/DTR card” on page 118.
- Procedure 10 “Removing the NT5K20/48 XTD card” on page 123.
- Procedure 11 “Moving TDS/DTR while keeping SDI ports” on page 125.
- Procedure 12 “Moving SDI ports while keeping TDS/DTR” on page 128.
- Procedure 13 “Defining TDS/DTR/XTD on the NTDK20 SSC” on page 130.
- Procedure 14 “Defining SDI ports 1 and 2” on page 132.

Removing the NTAK03 TDS/DTR card

Perform this procedure to remove the NTAK03 TDS/DTR card and use the NTDK20 SSC card for these functions instead. Doing this frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. The TDS must be assigned to the SSC card in slot 0 before the DTR units are programmed. In addition, the TDS/DTR card must be disabled before removing the TDS from its card slot.

Procedure 9 Removing the NTAK03 TDS/DTR card

1 Print the existing SDI configuration in LD 22.

Use the PRT request and ADAN or PRT type (depending on software release) to obtain a printout.

2 Disable the TDS/DTR card in LD 34.

Use the DISX N command where N is the card slot number of the TDS/DTR card.

3 Disable SDI ports 1 and 2 in LD 37.

Use the DIS TTY N command, where N is 1 and 2 (the SDI port number).

4 Configure TDS on the SSC card using LD 17 (shown in Table 4 below):**Table 4**
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	0	Tone and Digit switch loop 0 for the NTDK20 SSC card.

5 Remove the 8 DTR units on the TDS/DTR card using LD 13 (shown in Table 5 below):

Make sure all 8 units are removed.

Table 5
LD 13

Prompt	Response	Comments
REQ	OUT	Remove information
TYPE	DTR	Digitone Receivers data block
TN	c u	c= card slot occupied by the TDS/DTR card u= 0 to 7 (Repeat until all 8 units are removed)

6 Configure the 8 DTR units on the SSC card using LD 13 (shown in Table 6 below):

Make sure all 8 units are configured.

Table 6
LD 13

Prompt	Response	Comments
REQ	NEW	Add information
TYPE	DTR	Digitone Receivers data block
TN	c u	c= 0 u= 0 to 7 (Repeat until all 8 units are configured)

7 Remove the TDS function using LD 17

To remove the TDS function, follow the instructions in Table 7 below:

Note: If the TDS is not first disabled in LD 34 (see Step 2 on page 118) this step will fail. This step will also fail if DTRs are not first removed from the TDS/DTR slot.

Table 7
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	Xn	n=1 to 9 (TDS loop) Precede with an X to remove

8 Remove the SDI ports using LD 17 (shown in Table 8 below):

To remove TTY ports 1 and 2, do the following for each port:

Table 8
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	ADAN	Change I/O device
ADAN	OUT TTY X	X=1 X=2

9 Remove the NTA03 TDS/DTR card from the cabinet.**10 Configure SDI ports 1 and 2 on the SSC card using LD 17 (shown in Table 9 on page 121).**

Refer to the SDI printout obtained in Step 1 on page 118.

Table 9
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
ADAN	NEW TTY X	X=1 X=2
CDNO	0	Card number 0
PORT	X	X=1 X=2
DES	aaa...a	AML port designation (can be up to 16 alphanumeric characters)
BPS	300, 600, 1200, 2400, (4800), 9600, 19200, 38400,	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits
PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto enable SDI port
USER	BUG, SCH, MTC	
:		

11 Enable the SDI ports in LD 37.

Use the commands "ENL TTY 1" and "ENL TTY 2"

12 Enable the TDS/DTRs on the SSC card using LD 34.

Use the "ENLX 0" command.

13 Perform an EDD backup in LD 43.

Use the "EDD" command.

End of Procedure

Removing the NT5K20/48 XTD card

Perform this procedure to remove the NT5K20 XTD or NT5K48 XTD card and assign their functions to the NTDK20 SSC card instead. This procedure frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. The TDS must be assigned to the SSC card in slot 0 before the XTD units are programmed.

Procedure 10

Removing the NT5K20/48 XTD card

- 1 Remove the 8 XTD units on the NT5K20/48 card using LD 13 (see Table 10 below):

Make sure all 8 units are removed.

Table 10
LD 13

Prompt	Response	Comments
REQ	OUT	Remove information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c= card slot occupied by the XTD card u= 0 to 7 (Repeat until all 8 units are removed)

- 2 Configure TDS on the SSC card using LD 17 (see Table 11 below):

Table 11
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	0	Tone and Digit switch loop 0 for the NTDK20 SSC card.

3 Configure the 8 XTD units on the SSC card using LD 13 (see Table 12 below):

Make sure all 8 units are configured.

Note: The TDS loop must be configured in LD 17 before this step can be performed.

Table 12
LD 13

Prompt	Response	Comments
REQ	NEW	Add information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c= 0 u= 0 to 7 (Repeat until all 8 units are configured)
XTDT	(0)-7	Extended Tone Detector Table Number. If a table other than 0 is entered, it must exist in LD 97.
_DTR	(NO), YES	Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection

4 Remove the NT5K20 or NT5K48 XTD card from the cabinet.

5 Perform an EDD backup in LD 43.

Use the "EDD" command.

————— *End of Procedure* —————

Retaining the TDS/DTR card while moving functions to the SSC card

Perform this procedure if the NTA03DA (minimum vintage) TDS/DTR card is to remain in the system, but one of the its TDS/DTR or SDI port functions is to be moved to the NTDK20 SSC card:

Moving TDS/DTR and retaining SDI ports

To move TDS/DTR, you must remove the TDS/DTR function from the NTA03 TDS/DTR card and then assign it to slot 0.

Note: Perform the steps below in the order indicated. The TDS must be assigned to the SSC card in slot 0 before the DTR units are programmed. In addition, the TDS/DTR card must be disabled before removing the TDS from that card slot.

Procedure 11

Moving TDS/DTR while keeping SDI ports

1 Disable the NTA03 TDS/DTR card in LD 34.

Use the DISX N command where N is the card slot number of the TDS/DTR card.

2 Configure TDS on the SSC card using LD 17 (see Table 13 below);

Table 13

LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	0	Tone and Digit switch loop 0 for the NTDK20 SSC card.

3 Remove the 8 DTR units on the TDS/DTR card using LD 13 (see Table 14 below):

Make sure all 8 units are removed.

Table 14
LD 13

Prompt	Response	Comments
REQ	OUT	Remove information
TYPE	DTR	Digitone Receivers data block
TN	c u	c= card slot occupied by the TDS/DTR card u= 0 to 7 (Repeat until all 8 units are removed)

4 Configure the 8 DTR units on the SSC card using LD 13 (see Table 15 below):

Make sure you configure all 8 units.

Note: The TDS loop **must** be configured in LD 17 before this step is performed.

Table 15
LD 13

Prompt	Response	Comments
REQ	NEW	Add information
TYPE	DTR	Digitone Receivers data block
TN	c u	c= 0 u= 0 to 7 (Repeat until all 8 units are configured)

5 Remove the TDS function using LD 17.

To remove the TDS function, follow the instructions in Table 16 below:

Note: If the TDS is not first disabled in LD 34 (see Step 1 on page 125) this step will fail. This step will also fail if DTRs are not first removed from the TDS/DTR slot.

Table 16
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	Xn	n=1 to 9 (TDS loop) Precede with an X to remove

6 Enable the NTAK03 TDS/DTR to use the SDI port.**7 Enable the TDS/DTRs on the SSC card in LD 34. Use the “ENLX 0” command.****8 Perform an EDD backup in LD 43.**

————— *End of Procedure* —————

Procedure 12

Moving SDI ports while keeping TDS/DTR

1 Disable SDI ports 1 and 2 in LD 37.

Use the DIS TTY N command, where N is the SDI port number.

2 Remove the SDI ports using LD 17.

To remove TTY ports 1 and 2, follow the instructions in Table 17 (shown below) for each port:

Table 17

LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	ADAN	Change I/O device
ADAN	OUT TTY X	X=1 X=2

3 Configure SDI ports on the SSC card using LD 17 (see Table 18 below):**Table 18**
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
ADAN	NEW TTY X	X=1 X=2
CDNO	0	Card number 0
PORT	X	X=1 X=2
DES	aaa...a	AML port designation (can be up to 16 alphanumeric characters)
BPS	300, 600, 1200, 2400, (4800), 9600, 19200, 38400,	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits
PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto enable SDI port
USER	BUG, SCH, MTC	
:		

————— *End of Procedure* —————

Keeping the TDS/DTR card while configuring additional units or ports on the SSC card

Follow this procedure to retain the NTAK03 TDS/DTR card and the NT5K48 XTD card and take advantage of additional units or ports. Since these cards are already programmed, their functions will have to be moved to the NTDK20 SSC card.

Procedure 13

Defining TDS/DTR/XTD on the NTDK20 SSC

- 1 Configure TDS by entering 0 at the TDS prompt in LD 17 (see Table 19 below):

Table 19
LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
CEQU	YES	Changes to common equipment
TDS	0	Tone and Digit switch loop 0 for the NTDK20 SSC card.

- 2 Configure the DTR units on card 0, units 0 through 7 in LD 13 (see Table 20 below):

(This Step only applies if DTR is being used. If XTD is used instead, skip this step and proceed to Step 3 on page 131).

Note: DTRs are typically used in North America and allow the card to operate as a standard DTMF receiver. This step only applies if DTR is being used. If XTD is used instead, skip this step and proceed to Step 3 on page 131.

Table 20
LD 13

Prompt	Response	Comments
REQ	NEW	
TYPE	DTR	Define digitone receivers
TN	0 u	Card 0, u = 0-7

- 3 Configure the XTD units on card 0, units 0 through 7 in LD 13 (see Table 21 below). Make sure you configure all 8 units. (Do not perform this step if you are using DTR instead of XTD—you completed the procedure in Step 2).**

Note: XTDs are typically used in markets outside North America. Do not perform this step if DTR is used instead of XTD (see Step 2 on page 130).

Table 21
LD 13

Prompt	Response	Comments
REQ	NEW	Add information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c= 0 u= 0 to 7 (Repeat until all 8 units are configured)
XTDT	(0)-7	Extended Tone Detector Table Number. If a table other than 0 is entered, it must exist in LD 97.
_DTO	(NO), YES	Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection

————— *End of Procedure* —————

Procedure 14

Defining SDI ports 1 and 2

- 1 Load overlay program 17 (LD 17).
- 2 Configure SDI ports 1 and 2 as shown in the following Table:

Table 22

LD 17

Prompt	Response	Comments
REQ	CHG	
TYPE	CFN	
ADAN	NEW TTY X	X=1 X=2
CDNO	0	Card number 0
PORT	X	X=1 X=2
DES	aaa...a	AML port designation (can be up to 16 alphanumeric characters)
BPS	300, 600, 1200, 2400, (4800), 9600, 19200, 38400,	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits
PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto enable SDI port
USER	BUG, SCH, MTC	
:		

————— *End of Procedure* —————

Chapter 6 - Option 11/11E upgrade from Software Daughterboard or PCMCIA

General information

This chapter describes how to upgrade an existing Option 11 or 11E to Option 11C using the software daughterboard.

The Software Daughterboard is pre-programmed with the system software before being shipped to the customer site. This is the method used in most cases.

CAUTION

A Software Daughterboard, Security Device, and Keycode Data Sheet are required to allow proper installation of the software. A keycode data sheet is needed to complete the installation. Refer to the keycode data sheet when entering the ISM parameters, adding packages or changing the AUX ID.

How to upgrade to the Option 11C software system

Summary of steps

The Software Installation steps are summarized in the following list. They consist of:

- Installing the Software Daughterboard and Security Device.
- Setting the system time and date.
- Selecting the System Upgrade function.
- Selecting Feature Set and packages.
- Selecting a database.
- Selecting Incremental Software Management (ISM) parameters.
- Validating keycodes.
- Loading the software.

CAUTION

Wear the anti-static wrist strap provided in the bottom of the cabinet before handling circuit cards. Static electricity can damage the components of power supplies and circuit cards.

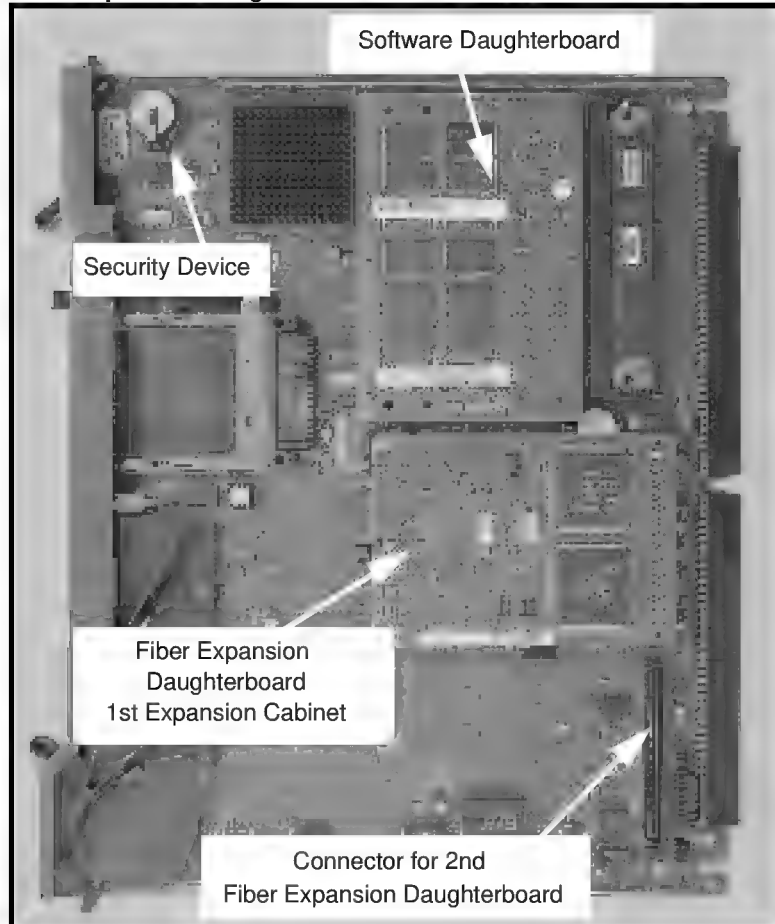
Upgrading the software

- 1 **If not previously done, install the Software Daughterboard and Security Device on the NTDK20 Small System Controller (SSC) card.**

To install the Software Daughterboard and Security Device refer to Figure 45 on page 135 and the following steps:

- Put on the anti-static wrist strap and insert the Software Daughterboard in the connector on the component side of the SSC card.
- Install any required Expansion Daughterboards.
- Insert the Security Device in the socket on the component side of the SSC card.

Figure 45
Fiber Expansion Daughterboards on the NTDK20 SSC card



2 If not previously done, power up the system.

To power up the system:

- Make sure that the power is connected to the cabinet then set the circuit breaker on the front of the power supply unit to ON.

- 3 If not previously done, install the NTDK20 Small System Controller (SSC) card in its slot (slot 0) of the main cabinet.**

Note: If a fiber optic cable is present, make sure that it is placed in the Fiber Routing Guide.

- 4 Observe the terminal screen.**

One of two messages will appear and the software installation proceeds accordingly. If the message is:

INSERT SOFTWARE DELIVERY CARD

proceed with Step 5 on page 136.

OR IF the following is displayed:

INSTALL SETUP PROGRAM

go to Step 6 on page 137.

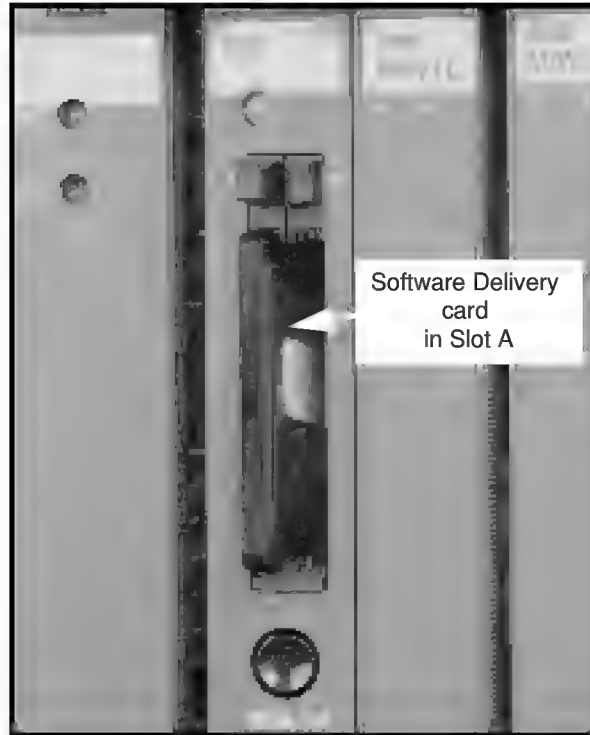
- 5 Skip this step unless the Software Delivery (PCMCIA) card is being used to install the software.**

If not previously done, install the Software Delivery card in the socket in the faceplate of the SSC card.

To install the Software Delivery card:

Insert the card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 Small System Controller (SSC) card. Gently press on the Software Delivery card until it is firmly seated. Refer to Figure 46 on page 137 for correct placement of the SSC card.

Figure 46
PCMCIA card slot location



6 Observe the terminal screen.

If the following is displayed:

Current system time and date: 00:00:00 -- 00/00/00

proceed to Step 7 on page 138.

OR IF the following is displayed:

Software Installation Main Menu

proceed to Step 8 on page 138.

7 Set the system Time and Date.

Note: The Time and Date prompt appears only when the Install Setup Program detects a system Year Date that is not in the range of 1995-2095. The responses shown below are examples of how to enter the system Time and Date:

Enter new time (hh/mm/ss)

08:00:00 <cr>

Enter new date (yy/mm/dd)

95/05/01 <cr>

08:00:00 -- 95/05/01 is the new system time and date

y <cr>

8 Select item 1 or 2 from the Main Menu.

Software Installation Main Menu

1. New System Installation or Option 11/11E Upgrade - From Software Daughterboard

2. System Upgrade

3. Utilities

4. New System Installation - From Software Delivery Card

[q]uit, [h]elp or [?], <cr> - redisplay

1 <cr> (Option 11/11E upgrade from Software Daughterboard)

2 <cr> (System Upgrade)

If the response was **ONE** proceed with Step 10 on page 139.

If the response was **TWO** proceed with Step 9 on page 139.

9 Select type of upgrade to be performed.

Meridian 1 Software Rls 2202b will be installed.

Select type of upgrade to be performed:

1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/parameter upgrade

[q]uit, <cr> current menu, [m]ain menu, [h]elp or [?],
[p]revious menu

1 <cr> (Option 11/11E to Option 11C).

Proceed with the next step, Step 10 on page 139.

10 Select the Feature Set to be enabled.

Note: The Feature Set selected must match the ones provided with key codes. The Feature Set names shown below are **examples only**:

Select Feature Set You Wish to Enable:

1. General Business (NTSKxxxx)
2. Enhanced Business (NTSKxxxx)
3. Enterprise (NTSKxxxx)
4. NAS/VNS (NTSKxxxx)

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr>
redisplay

(example only:)

Enter Selection:

2 <cr> (Enhanced Business).

11 Indicate whether or not packages are to be added.

Feature Set Selection: Enhanced Business

Do you wish to add packages?

Select no, yes or abort:

n <cr> (no)

y <cr> (yes)

a <cr> (abort)

Note: Abort returns you to the main menu.

If the response was **NO** go to Step 13 on page 141.

If the response was **YES** proceed with the next step, Step 11 on page 140.

12 Select the Feature packages to be added.

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95
98-104 107-111 113-116 118-120 122-125 127-129 131-133
135 137-141

Enter packages (s) to be added, blank line to end:

215-235 <cr>

Note: (<cr> ends selection entry or if no packages are to be added).

13 Confirm Feature Set and packages.

Your Feature Set Selection is "Enhanced Business":

Additional Packages selected: 215-235

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95
100-104 107-111 113-116 118-120 122-125 127-129 131-133
135 137-141

...

...

200-208 215-235

Is this selection correct?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu).

If the response was **NO** go to Step 10 on page 139.

If the response was **YES** proceed with the next step, Step 14 on page 142.

14 Select a Database.

If you are installing from a Software Delivery (PCMCIA) Card go to Step 17 on page 145.

IF you are installing from a Software Daughterboard continue here:

Select database to Install:

1. Pre-Configured database - Enhanced Business
2. Basic Configuration
3. CCBR Restore File
4. Option 11/11E Software Cartridge

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr>
redisplay

Enter Selection: **3 or 4 <cr>**

IF your selection was CCBR Restore File, go to Step 18 on page 145.

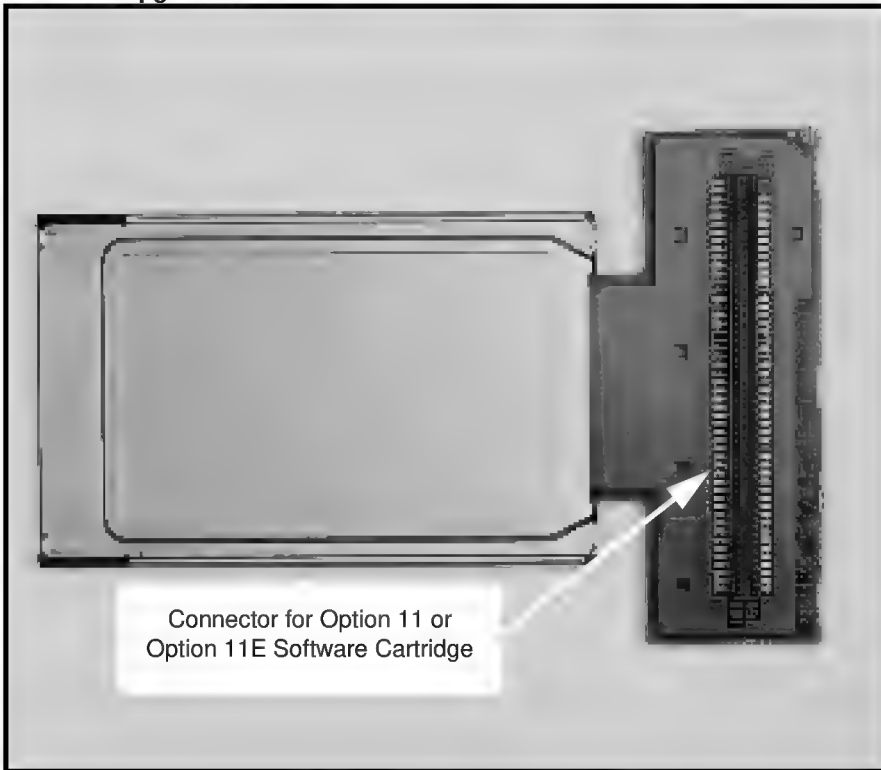
IF your selection was Option 11/11E Software Cartridge continue with the next step, Step 15 on page 143.

15 Connect the Option 11/11E Software Cartridge to the Database Upgrade Tool.

Perform this step only when upgrading using the Option 11/11E Software Cartridge as a database source. If upgrading using the CCBR Restore file as a database source, complete Step 18 on page 145, then do Step 19 on page 146.

Refer to Figure 47 (shown below) for correct connection of the Software Cartridge to the Database Upgrade Tool.

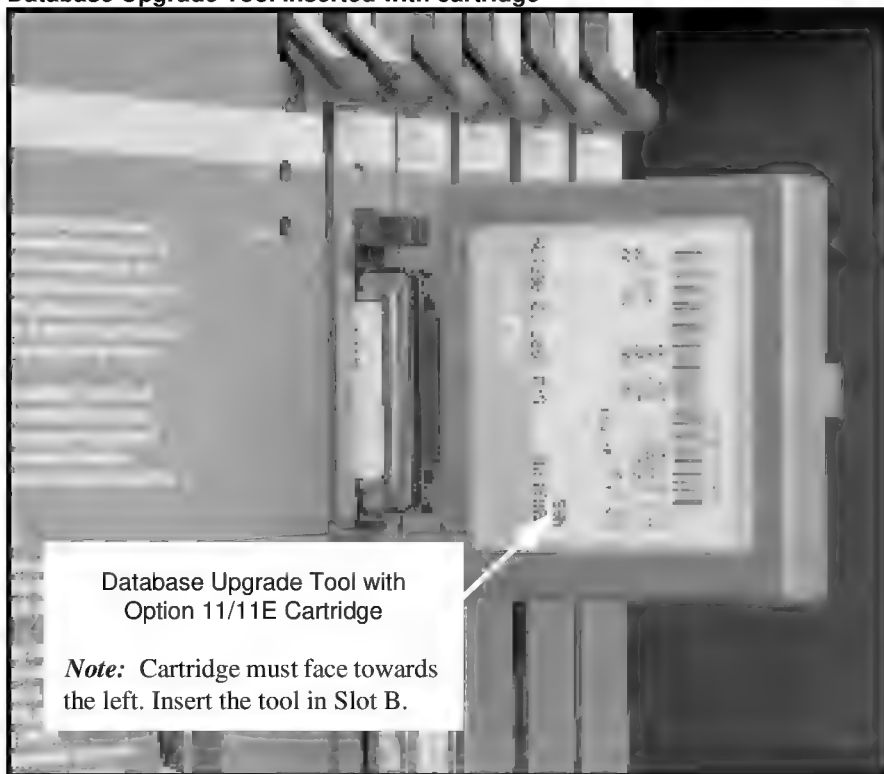
Figure 47
Database Upgrade Tool



16 Install the Database Upgrade Tool and cartridge.

Insert the Database Upgrade Tool with the attached Option 11/11E cartridge into drive b (see Figure 48 shown below).

Figure 48
Database Upgrade Tool inserted with cartridge



17 Select a Database using the PCMCIA card.

If you are installing from a Software Daughterboard go to Step 14 on page 142.

If you are installing from a Software Delivery (PCMCIA) card continue here:

Select database to Install:

1. CCBP Restore file

2. Option 11/11E Software Cartridge

[q]uit, [m]ain, [[p]revious menu, <cr> - redisplay

Enter Selection:

1 <cr> (CCBP Restore file)

2 <CR> (Option 11/11E Software Cartridge).

If the response was **ONE** continue with the next step, Step 18 on page 145.

If the response was **TWO** go to Step 15 on page 143.

18 Confirm database selection.

Warning: you must have an Option 11/11E database.

Do you wish to continue?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu).

If the response was **NO** go to Step 14 on page 142.

If the response was **YES** go to Step 19 on page 146.

19 Review ISM parameters.

Review the current ISM parameter settings to determine if they need changing.

Current ISM Parameters:

TNS (1000) **(maximum number of terminal numbers)**

AGNT (1000) **(maximum number of ACD agents)**

ACDN (0100) **(maximum number of ACD DNs)**

AST (0000) **(maximum number of associate Sets)**

DSL (0000) **(maximum number of Digital Subscriber Loops)**

LTID (0000) **(maximum number of Logical Terminal IDs)**

RAN_CON (0010) **(default RAN connection)**

RAN_RTE (9999) **(default RAN routes)**

MUS_CON (0100) **(default MUS connection)**

BRAND (0) **(brandline)**

MOPT (0000) **(Meridian Mail option)**

Do you wish to change ISM parameters?

n <cr> (no change)

y <cr> (change)

a <cr> (abort, return to main menu).

Note: Depending on the type of upgrade you are performing the **a** **(abort, return to main menu)** selection may or may not be displayed.

If the response was **NO** go to Step 22 on page 149.

If the response was **YES** continue with the next step, Step 20 on page 147.

20 Select ISM parameters.

Enter new ISM parameters, **<cr>** to leave as is:

TNS (1000)

AGNT (1000)

ACDN (0100)

AST (0000)

DSL (0000)

LTID (0000)

RAN_CON (0010)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

MOPT (0000)

21 Confirm ISM parameters.

New ISM parameters are:

TNS (1000)

AGNT (1000)

ACDN (0100)

AST (0000)

DSL (0000)

LTID (0000)

RAN_CON (0010)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

MOPT (0000)

Is this correct?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu).

If the response was **NO** go to Step 19 on page 146.

If the response was **YES** go to Step 22 on page 149.

22 Define the AUX ID.

Note: The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or Option 11E site ID.

Security ID: 20000326

Current AUX ID: 20000326

Do you wish to change the AUX ID?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **YES** go to Step 23 on page 150.

If the response was **NO** go to Step 24 on page 150.

23 Enter the AUX ID.

Enter the Option 11/11E System ID for the new AUX ID,
<cr> to maintain

12121212 <cr>

New AUX ID: 12121212

Is this correct?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **NO** go to Step 22 on page 149.

If the response was **YES** continue with Step 24 on page 150.

24 Review and confirm information entered.

Software Upgrade Summary:

Security ID:20000326

Aux ID:12121212

Added Pkgs:215-235

Feature Set:Enhanced Business

Database:Company.ABC

The above Software Upgrade Summary is displayed (or the S/W Release information as shown below) to allow review and confirmation of data entered.

S/W Release: 2304C

ISM Parameters

TSN: 1000 1000

AGNT: 1000 1000

ACDN: 0100 0100

AST: 0000 0150

DSL: 0000 0100

LTID: 0000 0000

RAN_CON: 0000 0010

RAN_RTE: 10000 9999

MUS_CON: 0000 0100

BRAND: 1 0

MOPT: 0000 0000

Note: Both the old and the new parameters are displayed.

Is this correct?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **YES** go to Step 25 on page 152.

If the response was **NO** go to Step 10 on page 139.

25 Enter the keycodes

Note: Enter keycodes in place of **x, y, z** shown below as examples only.

Enter new Keycodes:

Key 1:xxxxxxxx <cr>

Key 2:yyyyyyyy <cr>

Key 3:zzzzzzzz <cr>

After the last keycode is entered, the system displays a message of successful or unsuccessful, follow the instructions given below.

'Keycode validation successful'

WARNING A system restart will be invoked as part of the software installation process".

If the **successful** message appears go to Step 26 on page 152.

'Keycode validation unsuccessful'

If the **unsuccessful** message appears, repeat this step, Step 25 on page 152.

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

26 Complete the software installation.

Are you sure you wish to perform the installation?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **YES** this is the end of the Software Installation program.

If the response was **NO** go to Step 8 on page 138.

End of Procedure

Chapter 7- Upgrading Option 11C software to a new release

General information

This chapter describes how to upgrade software on the Option 11C to another release using the Software Installation Program. This program is menu driven. It is straight forward and includes a “Help” facility to assist in making proper selections.

This chapter contains two procedures as follows:

- Procedure 15 on page 156 describes how to upgrade the software on an existing Option 11C to a new release or issue using the Software Delivery (PCMCIA) card.
- Procedure 16 on page 169 describes how to revert to the previous software version.

CAUTION

A new Keycode Data Sheet and Software Delivery (PCMCIA) card programmed with the new software release are required to complete the upgrade.

Refer to the keycode data sheet when entering the ISM parameters, adding packages or changing the AUX ID.

Summary of items required

The following items are required to perform software upgrades:

- A Software Delivery (PCMCIA) card containing the new software
- Keycode Data Sheet
- A TTY terminal connected to port 0.

Upgrading the Option 11C software

Summary of steps

The following list is a summary of the steps which should be followed when upgrading from one software release to another. The steps consist of:

- Installing the Software Delivery card
- Invoking the Software Installation Program
- Checking, and if necessary, updating the Boot ROM code (see “Reason for updating the Boot Code” on page 155)
- Making changes to the Feature Set, if needed
- Selecting a database
- Making changes to the ISM parameters, if needed
- Validating keycodes
- Loading the software.

CAUTION

Please read this important message on Upgrades

When upgrading from Release 22 to Release 23 or higher, you **MUST** use the SYSLOAD method of upgrading as described below.

SYSLOAD method

Toggle Power Supply to OFF, then to ON. During the reboot, enter 'CONTROL-I' to access the Installation Program.

Upgrading from Release 22 to a higher Release cannot be achieved properly using the UPGRADE command.

UPGRADE method

Login to the system and select LD 143. Type UPGRADE to access the Installation Program.

If the 'UPGRADE' method is attempted, an invalid key code message will be displayed. If this occurs, reinitiate using the 'SYSLOAD' method.

Both methods (SYSLOAD or UPGRADE) can be used when upgrading from Release 23 to a higher Release or an up-issue of Release 23. Both methods are documented in this guide.

Reason for updating the Boot Code

The Boot Code on the existing SSC card must be Release 09 or higher in order to support the new NTDK81 Flash Daughterboard. Once updated, the Boot Code will support both the NTDK21 and NTDK81 Flash Daughterboards. It is strongly recommended that the Boot Code be updated to at least REL 09 when upgrading the software.

Note: Although updating the Boot Code is not required if the NTK81AA Flash Daughterboard is not being used, it is strongly recommended that the update to Release 09 (or higher) be done when upgrading the software. This will significantly simplify any future change from the existing NTDK21 Flash Daughterboard to the NTDK81 Flash Daughterboard.

Upgrade procedure

The following procedure describes how to upgrade and install the software using Software Delivery (PCMCIA) card.

Procedure 15 Upgrading the software

1 Perform a Data Dump (EDD).

To perform an EDD:

- Load overlay program 43 (LD 43 or 143)
- Enter command EDD.

2 Disable all DCH using LD 60.

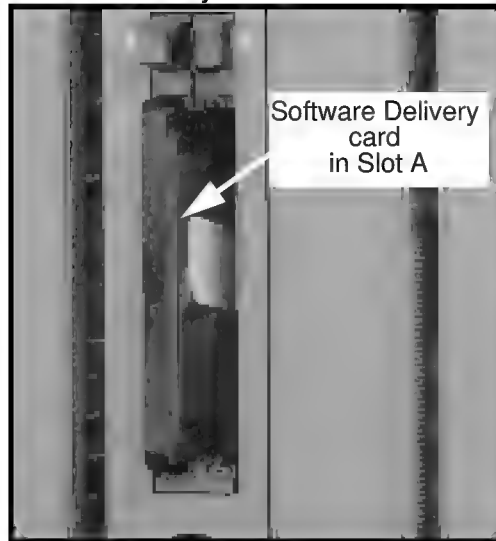
3 Disable and AML links using LD 48.

4 If not previously done, insert the Software Delivery card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 Small System Controller (SSC) card.

See Figure 49 on page 157 for correct placement.

Note: Gently press on the PCMCIA card until it is firmly seated.

Figure 49
Software Delivery Card



5 Select the method of invoking the Software Installation Program.

CAUTION

Please read this important message on Upgrades

When upgrading from Release 22 to Release 23 or higher, you **MUST** use the SYSLOAD method of upgrading as described below.

SYSLOAD method

Toggle Power Supply to OFF, then to ON. During the reboot, enter 'CONTROL-I' to access the Installation Program.

Upgrading from Release 22 to a higher Release cannot be achieved properly using the UPGRADE command.

UPGRADE method

Login to the system and select LD 143. Type UPGRADE to access the Installation Program.

If the 'UPGRADE' method is attempted, an invalid key code message will be displayed. If this occurs, reinitiate using the 'SYSLOAD' method.

Both methods (SYSLOAD or UPGRADE) can be used when upgrading from Release 23 to a higher Release or an up-issue of Release 23. Both methods are documented in this guide.

There are two methods of invoking the Software Installation Program:

By using the UPGRADE command in Overlay 143

—or—

By pressing the 'control' and 'i' keys on the keyboard when prompted during a SYSLOAD (go to Step 7 on page 159).

6 Login to the system by entering LOGI <cr> then proceed with the following:

Note: The response to PASS? is unique to each system. The response shown below is an *example* only.

PASS?

0000 <cr>

LD 143 <cr>

UPGRADE <cr>

IF the message SOFTWARE INSTALLATION PROGRAM is displayed go to Step 10 on page 160.

IF the message SOFTWARE INSTALLATION PROGRAM is **NOT** displayed repeat Step 6 on page 159 (this step) and make sure correct information is entered.

7 Invoke the Software Installation Program during a SYSLOAD.

Note: Perform this step only when invoking the Software Installation Program during a **SYSLOAD**. To invoke the program using Overlay 143, disregard this step and do Step 6 on page 159 instead.

Invoke a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

Note: A SYSLOAD can take from 20 to 30 minutes.

During SYSLOAD, the following prompt will appear:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE
INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

8 Check the release number on the faceplate of the NTDK20 SSC card.

If the card is Rlse 11 or higher, the Boot code does not require updating. Go to Step 10.

If the card is Rlse 10 or lower, the Boot Code may require updating. Go to Step 9.

9 Check the Boot Code version as described in “Chapter 13 - Using the flash boot ROM utility” on page 191.

The following list is a summary of the Steps which should be followed when checking the Boot Code:

- Select 'Utilities' from the Main menu.
- Select '7-Flash Boot ROM Utilities' from the Utilities menu.
- Select '1-List Flash Boot ROM' from the Flash Boot ROM menu.

The Active, Backup and Software Delivery Card Boot Code versions will be displayed.

If the 'Active' NTDK34 is REL 09 or higher, the Boot Code does not require updating. Go to Step 10.

If the 'Active' NTDK34 is REL 08 or lower, update the Boot Code.

- Select '2- Upgrade Flash Boot ROM'
- Enter 'Yes' in response to the prompt asking if the Flash Boot ROM is to be updated.
- Return to the 'Main' menu.

Note: There may or may not be anything in the 'Backup' Boot ROM. However, the 'Software Delivery Card' should show REL 09 or a higher release number. If it is REL 08 or lower, the upgrade cannot be done and the version of the Software Delivery Card should be checked for authenticity.

10 Select 'System Upgrade' (item 2) from the Software Installation Main Menu.

The 'Select Type of Upgrade to be Performed' menu will be displayed.

Enter Selection:

2 <cr> (System Upgrade).

11 Select item 2 from the 'Select Type of Upgrade to be Performed' menu.

Select type of upgrade to be performed:

1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/parameter Upgrade

[q]uit, <cr> current menu, [m]ain menu, [h]elp or
[?], [p]revious menu

Enter Selection:

2 <cr> (Option 11C New Software Upgrade).

12 The 'Select the Feature Set You Wish to Enable' menu will be displayed.

Select the Feature Set to be enabled from the list displayed. The Feature Set selected must match the ones provided with keycodes.

Note 1: *** The following questions require information on the Keycode Data Sheet. Please have it available.***

Note 2: *** If an External Data Card is being used for this system, please insert it into drive b: **NOW**.***

13 Select the packages to be added, if any.

Feature Set Selection: Enhanced Business

Do you wish to add packages?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu).

Note: <cr> ends selection entry or if no packages are to be added.

IF the response was **NO** go to Step 15 on page 163.

IF the response was **YES** go to Step 14 on page 162.

14 Confirm Feature Set and added packages.

The Feature Set and any added packages you selected are now displayed so you can review and confirm that they are entered correctly.

Note: The selections below are shown as *examples* only.

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95
100-104 107-111 113-116 118-120 122-125 127-129 131-133
135 137-141...

...

200-208 215-235

Is this correct?

n <cr> (no)

y <cr> (yes).

If the response was **NO** go to Step 12 on page 161.

If the response was **YES** continue with the next step, Step 15 on page 163.

15 Review ISM parameters.

The ISM parameters displayed on the terminal screen are the default settings associated with the Feature Set selection. These settings can be accepted without changes or changed to suit the requirements of the system.

Current ISM Parameters:

TNS (1000)(maximum number of terminal numbers)

AGNT (1000)(maximum number of ACD agents)

ACDN (0100)(maximum number of ACD DN's)

AST (0000)(maximum number of associate Sets)

DSL (0000)(maximum number of Digital Subscriber Loops)

LTID (0000)(maximum number of Logical Terminal IDs)

RAN_CON(0010)(default RAN connection)

RAN_RTE(9999)(default RAN routes)

MUS_CON(0100)(default MUS connection)

BRAND(0)(brandline)

MOPT (0000)(Meridian Mail option)

Do you wish to change ISM parameters?

n <cr> (no change)

y <cr> (change).

If the response was **NO** go to Step 18 on page 165.

If the response was **YES** continue with the next step, Step 16 on page 164.

16 Select ISM parameters.

Enter new ISM parameters, <cr> to leave as is:

TNS (1000)
AGNT (1000)
ACDN (0100)
AST (0000)
DSL (0000)
LTID (0000)
RAN_CON (0010)
RAN_RTE (9999)
MUS_CON (0100)
BRAND(0)
MOPT(0000)

Note: The only value that changes is for **AST**, enter **100 <cr>** to change.

17 Confirm ISM parameters.

New ISM parameters are:

TNS (1000)
AGNT (1000)
ACDN (0100)
AST (0000)
DSL (0000)
LTID (0000)
RAN_CON (0010)
RAN_RTE (9999)
MUS_CON (0100)
BRAND(0)
MOPT(0000)

Is this correct?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu).

If the response was **NO** go to Step 15 on page 163.

If the response was **YES** continue with Step 18 on page 165.

18 Define the AUX ID.

Note: The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or Option 11E site ID.

Security ID: 20000326

Current AUX ID: 20000326

Do you wish to change the AUX ID?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **YES** continue with Step 19 on page 165.

If the response was **NO** go to Step 20 on page 165.

19 Enter the AUX ID.

Enter the Option 11/11E System ID for the new AUX ID, <cr> to maintain.

New AUX ID: 12121212

Is this correct?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu).

If the response was **YES** continue with Step 20 on page 165.

If the response was **NO** go to Step 18 on page 165.

20 Review and confirm information entered.

Software Upgrade Summary:

Security ID: 20000326

Aux ID: 12121212

Database: Pre-Configured Database - Enhanced Business

S/S Release: 2202b2308b

Feature Set: Enhanced Business

Added Pkgs: none

ISM Parameters:

TNS (1000)

AGNT (1000)

ACDN (0100)

AST (0000)

DSL (0000)

LTID (0000)

RAN_CON (0010)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

MOPT (0000)

Is this correct?

y <cr> (yes)

n <cr> (no)

a <cr> (abort, return to main menu)

If the response was **YES** continue with Step 21 on page 167.

If the response was **NO** go to Step 12 on page 161.

21 Enter the keycodes

Enter keycodes in place of **x, y, z**, shown below as examples only.

Enter new Keycodes:

Key 1:xxxxxxx<cr>

Key 2:yyyyyyy<cr>

Key 3:zzzzzzz<cr>

After the last keycode is entered the system displays a message of successful or unsuccessful keycode validation.

IF the following is displayed:

```
`Keycode validation successful`
```

```
***WARNING*** A system restart will be invoked as  
part of the software installation process"
```

continue with the next step, Step 22 on page 167.

IF the following is displayed:

```
`Keycode validation unsuccessful`
```

go back to repeat this step, Step 21 on page 167 to re-enter correct keycodes.

Note: After three unsuccessful keycode validation attempts, the following message appears:

```
Keycode validation unsuccessful.
```

```
Installation aborted...returning to main menu.
```

22 Complete the software installation.

Are you sure you wish to perform the installation?

y <cr> (yes)

n <cr> (no)

a <cr> (abort)

If the response was **YES** this procedure is ended.

If the response was **NO** go to Step 10 on page 160.

End of Procedure

How to revert to the previous release of software

The following procedure describes how to revert to the previous release of software, Feature Set, Customer data and ISM Parameters using the Undo Installation option.

This option requires that the same Software Delivery (PCMCIA) card that was used to upgrade this Option 11C be installed and used to revert it to its former database. The Software Delivery (PCMCIA) card must not have been used to upgrade a subsequent Option 11C, since the Security ID will no longer match this system.

Note: When upgrading, the existing Option 11C database is saved (backed-up) on the Software Delivery (PCMCIA) card. The card contains only the backed-up database and Security ID of the last Option 11C with which it was used.

Summary of steps

The steps to revert to the previous database are summarized in the following list. They consist of:

- Checking to make sure the correct Software Delivery (PCMCIA) card is installed.
- Selecting the Utilities menu.
- Selecting Undo Installation option.
- Reverting to the previous database.

Reverting to previous release of software

The following procedure describes how to revert to the previous release of software using PCMCIA card.

Procedure 16

Reverting to Previous Software Procedure

- 1 **If not previously done, install the Software Delivery (PCMCIA) card in the socket in the faceplate of the SSC Card.**

Note: This Software Delivery card must be the same one that was used to upgrade this Option 11C. It must not have been used to upgrade a subsequent Option 11C because the Security ID will no longer match and the “undo” function will fail.

To install the Software Delivery (PCMCIA) card:

- Insert the PCMCIA card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 SSC card. Gently press on the PCMCIA card until it is firmly seated.

- 2 **Select the method of invoking the Software Installation Program**

There are two methods of invoking the Software Installation Program as follows:

- By using the UPGRADE command in Overlay 143

OR

- By pressing the 'control' and 'I' keys on the keyboard when prompted after the Software Delivery card is installed.

If you wish to invoke the program using Overlay 143 continue to Step 3 on page 170.

If you wish to invoke the program when prompted go to Step 4 on page 170.

3 Invoke the Software Installation Program using Overlay 143.

Note: Perform this step only when using the Overlay 143 to invoke the Software Installation Program. To invoke the program during a SYSLOAD, skip this step and go to Step 7 on page 159.

Login to the system by entering **LOGI <cr>** then proceed with the following:

Note: The response to **PASS?** is unique to each system. The response shown below is an example.

PASS?

0000 <cr>

LD 143 <cr>

UPGRADE <cr>

If the following message is displayed:

SOFTWARE INSTALLATION PROGRAM

go to Step 5 on page 171.

If the above message does not appear repeat this step, Step 3 on page 170 and make sure the correct information is entered.

4 Invoke the Software Installation Program when prompted.

Note: Perform this step only when invoking the Software Installation Program when prompted after the Software Delivery card is installed. To invoke the program using Overlay 143, disregard this step and go to Step 3 on page 170 instead.

Start system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

Note: When the **FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM** message appears a response must be entered within 5 seconds to invoke the program.

During SYSLOAD, the following prompt will appear:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE
INSTALLATION PROGRAM

Press and hold '**control**' key and press '**I**' .

5 Select Utilities from the Main Menu.

SOFTWARE INSTALLATION PROGRAM

Verify Security ID: 12345678

Software Installation Main Menu

1. New System Installation or Option 11/11E Upgrade - From
Software Daughterboard

2. System Upgrade

3. Utilities

4. New System Installation - From Software Delivery

Card

[q]uit, [h]elp or [?], <cr> redisplay

Enter Selection:

3 <cr> (Utilities)

6 Select item 6 from the Utilities Menu.

Utilities Menu:

1. Restore backed Up database

2. Archive Database Utilities

3. Install Archived database

4. Review Upgrade Information

5. Clear Upgrade Information

6. Undo Installation

7. Flash Boot ROM Utilities

[q]uit, [p]revious, [m]ain, [h]elp [?], <cr> redisplay

Enter Selection:

6 <cr> (Undo Installation)

7 Complete the software installation.

*** WARNING *** A system restart will be invoked as part of the Undo Installation process.

Are you sure you wish to undo the installation?

y <cr> (yes)

n <cr> (no)

a <cr> (abort)

If the response was **YES** that is the end of this procedure.

If the response was **NO** go to Step 6 on page 171.

End of Procedure

Chapter 8 - Option 11C Feature Set and ISM Parameters upgrade

General information

This chapter describes how to upgrade the Feature Set and ISM Parameters on an Option 11C when the software is not being upgraded to a new release (same release upgrade). The Software Delivery (PCMCIA) card is not required to perform this type of upgrade. This upgrade uses the Software Installation Program (LD 143). This program is menu driven. It is straight forward and includes a “Help” facility to assist in making proper selections.

Note: If more detailed information is required, refer to “Chapter 7- Upgrading Option 11C software to a new release” on page 153, which contains complete details of the Software Installation Program (LD 143).

How to upgrade Feature Set and ISM Parameters

Summary of steps

The Upgrading and Installation steps are summarized in the following list. They consist of:

- Invoking the Software Installation Program.
- Selecting the System Upgrade function.
- Selecting Feature Set and packages (optional).
- Selecting Incremental Software Management (ISM) parameters (optional).
- Validating keycodes.
- Loading the software.

Upgrading Feature Set and ISM Parameters

The following procedure describes how to upgrade the Feature Set and ISM Parameters without upgrading the software release.

Note: *** The following questions require information on the Keycode Data Sheet. Please have it available.***

Procedure 17

Upgrading Feature Set and ISM Parameters

1 Invoke the Software Installation Program using Overlay 143.

Login to the system by entering **LOGI <cr>**.

Enter the unique system password in response to the prompt **PASS?**.

2 Select 'System Upgrade' (item 2) from the Software Installation Main Menu.

The 'Select Type of Upgrade to be Performed' menu is displayed.

3 Select 'Option 11C Feature/parameter Upgrade' (item 3) from the 'Select Type of Upgrade to be Performed' menu.

4 Indicate whether you wish to change the current Feature Set.

Note: The Feature Set selected must match the ones provided with the keycodes.

IF the current Feature Set is to be changed enter '**y**' (YES) and you will be prompted to choose the new Feature Set.

IF the current Feature Set is to be retained enter '**n**' (NO).

5 Indicate whether or not packages are to be added.

6 Review and make changes to the ISM parameters, if needed.

Note: The ISM parameters displayed on the terminal screen are the default settings associated with the Feature Set selection. If Feature Set is not changed, the parameters displayed remain as the current ISM parameters. These settings can be accepted without changes or changed to suit the requirements of the system.

7 Define the AUX ID.

The default AUX ID is the system ID provided with the Option 11C. It should be replaced with the previous Option 11 or 11E site ID.

Note: The AUX ID will also be printed on your keycode sheet and must match the system ID (11C) or old site ID (11, 11E).

8 Review and confirm information entered.

The Same Release Upgrade Summary is displayed. Review and confirm the information displayed.

9 Enter the keycodes when prompted.

Once the system confirms and accepts the keycodes, the 'Are you sure you wish to perform the installation?' prompt appears.

10 Enter 'y' in response to the 'Are you sure you wish to perform the installation?' prompt.

Note: A system reload (SYSLOAD) must be invoked for the changes to take effect. However, it need not be invoked immediately since the information is stored in the Option 11C until the SYSLOAD is performed. Since a SYSLOAD interrupts service on the system, it may be preferable to invoke it later when a service interruption is less inconvenient.

End of Procedure

Chapter 9 - Restoring a backed up database

General information

This chapter describes how to use the Restore Backed Up database utility to restore a database from any of the following sources:

- the backup Flash Drive (using LD 43)
- a Software Delivery (PCMCIA) card (using LD 43)
- a Customer Configuration Backup and Restore (CCBR) file (using LD 143).

How to restore a backed up database

Summary of steps

The steps to restore a backed up database are summarized in the following list. They consist of:

- Selecting the Utilities function.
- Selecting the database source
- Restoring the database.

Restoring the database

The following procedure describes how to restore the database.

Procedure 18
Database Restoration Procedure

1 Invoke the Install Setup Program using Overlay 143.

Login to the system by entering **LOGI <cr>**.

Enter the unique system password in response to the prompt **PASS?**.

2 Select 'Utilities' (item 3) from the Main Menu.

3 Select Restore backed up database (item 1) from the Utilities Menu.

4 Select source of database.

The selections are displayed as follows:

Select Restore Database Source:

1. Backup Flash Drive
2. External Drive
3. Option 11C CCBR Restore file
4. Option 11/11E CCBR File
5. Option 11/11E Software Cartridge.

Enter your selection and continue accordingly.

5 Confirm Restore Database from the Backup Flash Drive.

The date of the backed up database is displayed and the following prompt:

Are you sure you wish to perform the Restore?

If your response was **NO** return to Step 3 on page 178.

If your response was **YES** continue with the next step, Step 6 on page 179.

Note: You may also respond with **<a>**ort to return to the main menu.

6 Complete restore from Flash Drive.

The system restores the backed up database selected and a message indicating the success or failure of the restoration is displayed.

If the restoration is successful this procedure is completed.

If the restoration was unsuccessful return to Step 2 on page 178.

Note: The 'Restore successful' message indicates that the database has been successfully restored and no further action is required.

7 Confirm Restore Database from the External Drive (PCMCIA card).

The following message is displayed:

```
Restoring primary drive from External Drive..  
(Date and time)
```

```
System Restart required to activate restored  
database
```

```
Are you sure you wish to perform the Restore?
```

Confirm that you wish to continue with the restoration.

8 Restore Database from the CCBR Restore file.

The following message is displayed:

WARNING: You must have an Option 11C CCBR file backed up.

WARNING: Your internal backup will be erased.

Are you sure you wish to Restore?

As the restoration progresses the following is displayed:

Entering receive mode for data transfer...

Escape back to host machine and commence upload...

Database transfer complete...

Restoring Primary drive from CCBR file...

Restore successful.

System Restart required to activate restored
database.

If the restoration was **successful** continue with the next step, Step 9 on page 180.

If the restoration was **unsuccessful** and the BKP011 message is displayed go to Step 1 on page 178.

If the restoration was unsuccessful and any message other than BKP011 is displayed go to Step 2 on page 178.

Definition of BKP011 message is: Restore successful but site ID in backup image differs from that of the switch. This is expected if the restored database is of a system with a different site ID.

9 Invoke a system restart (SYSLOAD).

Invoke a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply in the main cabinet to OFF then to ON.

If the SYSLOAD was **successful** this procedure is completed.

If the SYSLOAD was **unsuccessful** go to Step 1 on page 178.

End of Procedure

Chapter 10 - Archiving and removing databases

General information

This chapter describes how to use the Archive feature to:

- archive a new customer database
- list the databases that are archived
- remove existing archived databases.

The database can be defined in an off-site lab environment and saved (archived) on a Software Delivery (PCMCIA) card until it is required. It can then be loaded in the customer's system using the Software Delivery card.

How to use archive feature

The customer database must first be defined and loaded into the flash ROM on the NTDK20 Small System Controller (SSC) card before it can be archived on the Software Delivery card.

Summary of steps

The steps to archive a customer database are summarized in the following list. They consist of:

- Checking to make sure the correct Software Delivery card is installed.
- Selecting the Utilities function.
- Selecting the Archive option.

Using the archive feature

The following procedure describes how to use the archive feature to list, add and remove customer databases.

Procedure 19

Using the archive feature

- 1 **If not previously done, install the Software Delivery card in the socket in the faceplate of the SSC Card.**

Note: When adding a customer database to the archive, it must first be loaded in the SSC card of this system.

Only a customer database that is already defined and loaded in the SSC card can be added to the archive. Make sure that the desired database is defined and loaded before attempting to archive it.

Note: Methods used to define and load customer databases are described in previous chapters and are not repeated here.

Archived databases can be listed and removed from the archive directly from the Software Delivery card without being loaded in the SSC card.

Note: Complete instructions for the installation of the Software Delivery (PCMCIA) card can be found in Procedure 15 Upgrading the software on page 156.

- 2 **Select the method of invoking the Software Installation Program.**

Note: More detailed instructions for this and the following steps can be found in Procedure 15 Upgrading the software on page 156.

- 3 **Invoke the Software Installation Program using Overlay 143.**

- 4 **Select Utilities from the Main Menu.**

- 5 **Select item 2 from the Utilities Menu.**

6 Select archive function.

Customer Database Archives:

1. List customer databases
2. Remove customer database
3. Archive a customer database

[q]uit, [p]revious, [m]ain, [h]elp or [?]

<cr> - redisplay

Enter Selection:

- 1 <cr> (List Customer databases)
- 2 <cr> (Remove Customer database)
- 3 <cr> (Archive a Customer database).

If your response was **ONE** continue with the next step, Step 7 on page 183.

If your response was **TWO** go to Step 8 on page 184.

If your response was **THREE** go to Step 9 on page 184.

7 Review list of archived databases.

The list of archived customer databases are displayed. The 'Customer Database Archives' menu is also displayed.

If a database is to be removed from the archive continue with the next step, Step 8 on page 184.

If a database is to be added to the archive go to Step 9 on page 184.

If it's the end of activity enter the following:

q <cr> (End).

8 Remove the desired customer database from the archive.

The archived databases and the following prompt are displayed:

```
q]uit, <cr>current menu, [m]ain, [p]revious menu
```

Enter selection:

Remove database

'Name of archived database'
database?

Enter your selection and respond to the confirm removal prompt.

9 Add the customer database to the archive.

When you select to add a customer database to the archive the following prompt is displayed:

Enter a Customer name for your customized data:

Type in the name for this archived database and the system displays the name for confirmation. When confirmed the following message is displayed:

Copying database from primary drive to *'Name of archived database'*.

End of Procedure

Chapter 11 - Installing an archived database

General information

This chapter describes how to install an archived Customer Database in a designated Option 11C using the Software Delivery (PCMCIA) card.

How to install an archived database

Summary of steps

The archived customer database installation steps are summarized in the following list. They consist of:

- Checking to make sure the Software Delivery card is installed.
- Selecting the Utilities menu.
- Selecting Install Archived database option.
- Loading the database.

Installing the database

The following procedure describes how to install an archived database using Software Delivery card.

Procedure 20 Installing an archived database

- 1 **If not previously done, install the Software Delivery card in the socket in the faceplate of the SSC Card.**

Note 1: This Software Delivery card must be the same one that was used to upgrade this Option 11C. It must not have been used to upgrade a subsequent Option 11C because the Security ID will no longer match and the “undo” function will fail.

Note 2: Complete instructions for the installation of the Software Delivery (PCMCIA) card can be found in Procedure 15 on page 156.

- 2 **Select the method of invoking the Software Installation Program.**

Note: More detailed instructions for this and the following steps can be found in Procedure 15 on page 156.

- 3 **Invoke the Software Installation Program using Overlay 143.**

- 4 **Select Utilities from the Main Menu.**

The Utilities Menu is displayed as shown below:

Utilities Menu:

1. Restore Backed Up database
2. Archive Customer defined databases
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities

[q]uit, <cr>current menu, [m]ain, [p]revious menu

- 5 **Select item 3 (Install Archived Database) from the Utilities Menu.**

The system displays the list of archived customer databases.

6 Select the Customer Database.

Type in the name of the database you wish to restore.

7 Confirm database selection.

The system prompts you to confirm the name of the database to be restored.

If your response was **YES** continue with the next step, Step 8 on page 187.

If your response was **NO** go to Step 6 on page 187 to select a customer database.

8 Restore the archived database.

The following is displayed:

Restoring Archived database to Primary drive...

Restore successful.

System Restart required to activate database.

If the restore was successful that is the end of this procedure.

If the restore was unsuccessful go to Step 4 on page 186.

End of Procedure

Chapter 12 - Reviewing and clearing upgrade information

General information

This chapter describes how to use the Review Upgrade Information and Clear Upgrade Information options.

These options provide a means of reviewing the upgrade information that was entered and, if required, a means of clearing the upgrade information from the Software Installation Program.

How to review and clear upgrade information

Summary of steps

The steps to review and clear upgrade information are summarized in the following list. They consist of:

- Checking to make sure the Software Delivery (PCMCIA) card is installed.
- Selecting the Utilities menu.
- Selecting Review Upgrade Information option.
- Selecting Clear Upgrade Information option (if required).

Reviewing and clearing upgrade information

The following procedure describes how to review and, if desired, clear the upgrade information.

Procedure 21
Reviewing and clearing upgrade information

- 1 If not previously done, install the Software Delivery card in the socket in the faceplate of the SSC Card.**

Note: Complete instructions for the installation of the Software Delivery (PCMCIA) card can be found in Procedure 15 Upgrading the software on page 156.
- 2 Select the method of invoking the Software Installation Program.**

Note: More detailed instructions for this and the following steps can be found in Procedure 15 Upgrading the software on page 156.
- 3 Invoke the Software Installation Program using Overlay 143.**
- 4 Select Utilities from the Main Menu.**
- 5 Select the Review (item 4) or Clear (item 5) option from the Utilities Menu.**

If your response was **FOUR** go to Step 6 on page 190.
If your response was **FIVE** go to Step 7 on page 190.
- 6 Review summary of upgrade information.**

The upgrade information is displayed for your review. When finished go to Step 5 on page 190.
- 7 Review and clear or retain upgrade information.**

The upgrade information selected is displayed and the following prompt displayed:

Do you wish to clear the Upgrade information?

y <cr> (yes)
n <cr> (no)
a <cr> (abort, return to main menu).

If your response was **YES** that is the end of this procedure.
If your response was **NO** go to Step 4 on page 190.

End of Procedure

Chapter 13 - Using the flash boot ROM utility

General information

This chapter describes how to use the Flash Boot ROM utility to:

- display a list showing the status and version of the Flash Boot ROMs installed in the system and on the Software Delivery (PCMCIA) card (if it is present)
- upgrade the Flash Boot ROM (the Flash Boot ROM is not automatically upgraded when the software is upgraded)
- update the Boot Code on the SSC card in conjunction with a Software Daughterboard change from an NTDK21 Software Daughterboard to an NTDK81 Software Daughterboard

Note: The updated Boot Code supports both the NTDK21 and NTDK81 Software Daughterboards. It is recommended that, whenever possible, the Boot Code be updated even if the existing NTDK21 Software Daughterboard is not presently being replaced with the NTDK81 Software Daughterboard. This will simplify any future Daughterboard replacement.

- restore a Flash Boot ROM.

How to use the flash boot ROM utility

Summary of steps

The steps to follow to perform the Flash Boot ROM functions are summarized in the following list. They consist of:

- Checking to make sure the Software Delivery (PCMCIA) card is installed, if one is provided.
- Invoking the Software Installation program.
- Selecting the Utilities function.
- Selecting Flash Boot ROM utility.
- Selecting the desired Flash Boot ROM option.
- Invoking the selected Flash Boot ROM function.

Using the Flash Boot ROM Utility

The following procedure describes how to use the Flash Boot ROM utility.

Procedure 22

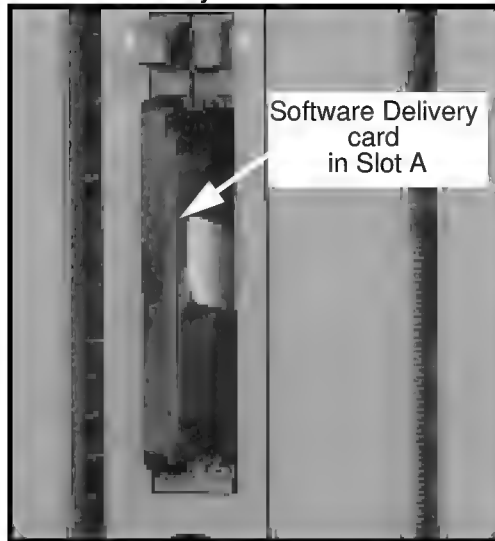
Using flash boot ROM utility

- 1 If one is provided and has not been installed, install the Software Delivery card in the socket in the faceplate of the SSC Card.**

See Figure 50 on page 193 for correct placement.

Gently press on the PCMCIA card until it is firmly seated.

Figure 50
Software Delivery Card



2 Invoke the Software Installation Program using Overlay 143.

Note: The response to `PASS?` is unique to each system. The response shown below is an *example only*.

`LOGI`

`PASS?`

`0000 <cr>`

`LD 143 <cr>`

`UPGRADE <cr>`

IF the message SOFTWARE INSTALLATION PROGRAM is displayed go to Step 3.

IF the message SOFTWARE INSTALLATION PROGRAM is **NOT** displayed repeat Step 2 (this step) and make sure correct information is entered.

3 Select item 3- 'Utilities' from the main menu.

4 Select item 7 - 'Flash Boot ROM Utilities' from the Utilities menu.

5 Select an option from the Flash Boot ROM Utilities menu.

The options are displayed as shown below:

Flash Boot ROM Utilities Menu:

1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM

[q]uit, <cr>current menu, [m]ain, [p]revious menu

Enter Selection:

- 1 <cr>** (List Flash Boot ROM)
- 2 <cr>** (Upgrade Flash Boot ROM)
- 3 <cr>** (Restore Flash Boot ROM)

If your response was **1** go to Step 6 on page 195.

If your response was **2** go to Step 7 on page 197.

If your response was **3** go to Step 8 on page 197.

6 Review the Flash Boot ROM summary.

The following information is displayed when the 'List Flash Boot ROM' utility is selected in Step 5 on page 194:

- the version of the active Flash Boot ROM
- the version of the backup Flash Boot ROM (if it exists)
- the version of the Flash Boot ROM residing on the Software Delivery (PCMCIA) card (if it exists).

The following are four examples of what might be displayed on the screen:

Example 1:

The Software Delivery Card (PCMCIA) contains a new version of the Flash Boot ROM. There is also an older backed-up version of the Flash Boot ROM.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- NTDK34AA REL 03

(a newer version)

Return to Step 5 on page 194.

Example 2:

The Software Delivery Card (PCMCIA) is not installed.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- card not installed

(Software Delivery not installed).

Return to Step 5 on page 194.

Example 3:

There is no Flash Boot ROM on the Software Delivery Card (PCMCIA).

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- no Flash Boot ROM on card

(no Flash Boot ROM on Software Delivery card).

Return to Step 5 on page 194.

Example 4:

The Software Delivery Card (PCMCIA) has the same version as the current active Flash Boot ROM.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 03

(the version which is active)

Backup -- NTDK34AA REL 02

(the previous active version)

Software Delivery Card -- NTDK34AA REL 03

(same version as on Software Delivery)

Return to Step 5 on page 194.

7 Perform or terminate Flash Boot ROM upgrade.

Upgrading Active Boot ROM to NTDK34AA REL 03

System Restart required to activate Flash Boot ROM upgrade.

*** WARNING *** A system restart will be invoked as part of the Flash Boot ROM Upgrade.

You are prompted to perform the Flash Boot ROM upgrade.

If your response was **NO** go to Step 3 on page 193.

If your response was **YES** that is the end of this procedure.

8 Perform or terminate Flash Boot ROM restore.

Restoring Flash Boot ROM to NTDK34AA REL 01

System Restart required to activate restored Flash Boot ROM.

*** WARNING *** A system restart will be invoked as part of the Flash Boot ROM Restore.

You are prompted to perform the Flash Boot ROM Restore.

If your response was **YES** that is the end of this procedure.

If your response was **NO** go to Step 3 on page 193.

End of Procedure

Updating the Boot Code to support the NTDK81 Software Daughterboard.

Reason for updating the Boot Code

The Boot Code on the existing SSC card must be Release 09 or higher in order to support the NTDK81 Flash Daughterboard. Once updated, the Boot Code will support both the NTDK21 and NTDK81 Flash Daughterboards.

Although updating the Boot Code is not required if the NTK81AA Flash Daughterboard is not being used, it is strongly recommended that the update to Release 09 (or higher) be done when possible. This will significantly simplify any future change from the existing NTDK21 Flash Daughterboard to the NTDK81 Flash Daughterboard.

Procedure 23 on page 199 describes the steps to follow when updating the Boot Code to support the NTDK81 Software Daughterboard.

Procedure 24 on page 201 describes the steps to follow when updating the Boot Code and installing an NTDK81 as part of upgrading the system software.

Procedure 23
Updating the Boot Code

Note: Service on the system is not interrupted while performing this procedure.

- 1 **If not previously done, insert the Software Delivery card in slot A of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.**

See Figure 50 on page 193 for correct placement.

Gently press on the PCMCIA card until it is firmly seated.

- 2 **Proceed with the following to login and load overlay program 143 (LD 143).**

Note: The response to `PASS?` is unique to each system. The response shown below is an *example* only.

`LOGI`

`PASS?`

`0000 <cr>`

`LD 143 <cr>`

`UPGRADE <cr>`

IF the message SOFTWARE INSTALLATION PROGRAM is displayed go to Step 3.

IF the message SOFTWARE INSTALLATION PROGRAM is **NOT** displayed repeat Step 2 (this step) and make sure correct information is entered.

- 3 **Select item 3- 'Utilities' from the main menu.**
- 4 **Select item 7 - 'Flash Boot ROM Utilities' from the Utilities menu.**

- 5 **Select item 1 - 'Flash Boot ROM Summary' from the Flash Boot ROM Utilities menu to determine the Release (REL) number of the active Boot Code.**

A response of the following form will be received:

Active -- NTDK34AA REL 05 (REL number will vary)

Backup -- NTDK34AA REL 02 (REL number, if one is listed, will vary)

Software Delivery Card -- NTDK34AA REL 09

If the Active Boot Code release is REL 09 or later, no further action is needed. Go to Step 8.

If the Active Boot Code release is REL 08 or earlier, go to Step 6.

Note: There may not be anything in the backup Boot ROM. The Software Delivery (PCMCIA) Card should indicate release REL 09 or later — if not, an upgrade cannot be done, and the PCMCIA card version should be checked.

- 6 **Select item 2 -'Upgrade the Boot Flash ROM' from the Flash Boot ROM Utilities manu.**

- 7 **Respond 'yes' to prompt asking you to confirm that you wish to update the Boot ROM.**

- 8 **Exit Overlay 143 and log off.**

Note: If the system software is to be upgraded, go to "Chapter 7- Upgrading Option 11C software to a new release" on page 153.

End of Procedure

Procedure 24**Updating the Boot Code and installing an NTDK81 as part of upgrading the system software****1 Perform a Data Dump (EDD).**

To perform an EDD:

- Load overlay program 43 (LD 43 or 143)
- Enter command EDD.

2 Disable all DCH using LD 60.**3 Disable and AML links using LD 48.****4 If not previously done, insert the Software Delivery card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 Small System Controller (SSC) card.**

See Figure 50 on page 193.

5 If not previously done, load the Software Installation Program (LD 143).**6 Select item 3- 'Utilities' from the main menu.****7 Select item 7 - Flash Boot ROM Utilities - from the Utilities menu.****8 Select item 1 - 'Flash Boot ROM Summary' from the Flash Boot ROM Utilities menu to determine the Release (REL) number of the currently active Boot Code.**

A response of the following form will be received:

Active -- NTDK34AA REL 05 (REL number will vary)

Backup -- NTDK34AA REL 02 (REL number, if one is listed, will vary)

Software Delivery Card -- NTDK34AA REL 09

If the Active Boot Code release is REL 09 or later, no further action is needed. Go to Step 11.

If the Active Boot Code release is REL 08 or earlier, go to Step 9.

Note: There may not be anything in the backup Boot ROM. The Software Delivery (PCMCIA) Card should indicate release REL 09 or later — if not, an upgrade cannot be done, and the PCMCIA card version should be checked.

- 9 **Select item 2 - 'Upgrade the Boot Flash ROM' from the Flash Boot ROM Utilities manu.**
- 10 **Respond 'yes' to prompt asking you to confirm that you wish to update the Boot ROM.**
- 11 **Set the breaker on the power supply to 'OFF' and change the Flash Daughterboard. See Figure 50 on page 193.**
- 12 **Do one of the following:**
 - If the Release 23 software is pre-programmed on the new Flash Daughterboard, restore service on the system by setting the breaker on the power supply to 'ON'.
 - If the daughterboard is blank, the Release 23 software can be loaded following the instructions found in the 'Starting up and Testing the System' chapter of *Option 11C Planning and Installation Guide*.
 - If the daughterboard has an earlier release of software, proceed to load Release 23.30 as described in "Chapter 7- Upgrading Option 11C software to a new release" on page 153.

End of Procedure

Chapter 14 - Installation summary

General information

This chapter describes how to obtain an installation summary using the Utilities menu.

How to use the installation summary utility

Summary of steps

Use the following steps to obtain an installation summary:

- Select the Utilities function.
- Select Current Installation Summary utility.

Using the Installation Summary Utility

Procedure 25

Current installation summary utility

Note: More detailed instructions for this and the following steps can be found in Procedure 15 Upgrading the software on page 156.

- 1 Invoke the Software Installation Program using Overlay 143.
- 2 **Invoke the Software Installation Program when prompted.**
- 3 **Select Utilities from the Main Menu.**
- 4 **Select item 8 (Current Installation Summary) from the Utilities Menu.**
- 5 **Review the Installation summary.**

The Installation Summary is displayed on the screen for your review.

End of Procedure

Meridian 1
Option 11C
Upgrade Procedures

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